Famous Artists Painting Course
Famous Artists Schools, Inc., Westport, Connecticut

Section **10**

Human form

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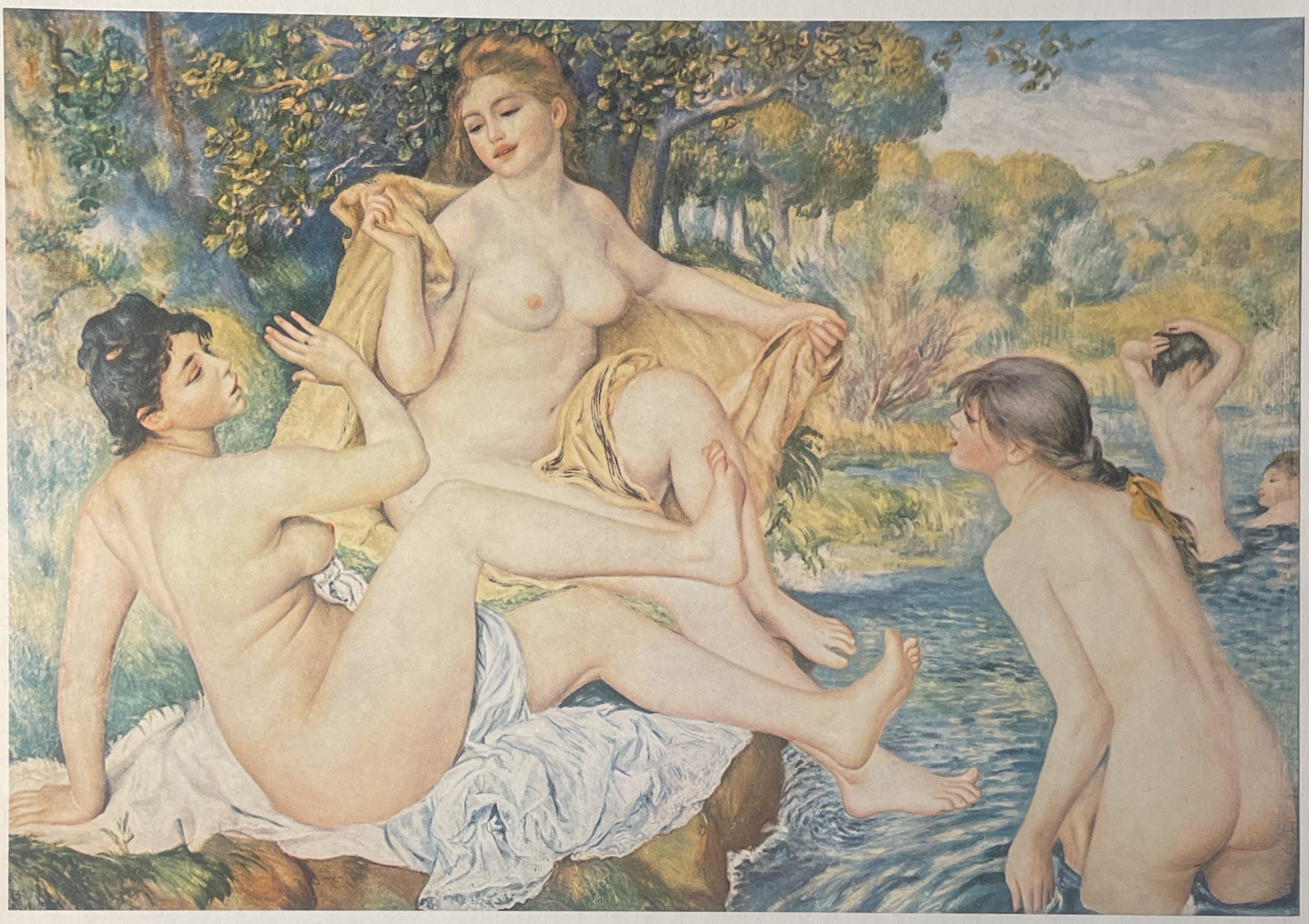
AUGUSTE RENOIR
The Bathers
Collection of Carroll S. Tyson



The human form is presented here in a number of poses, each natural and graceful. Problems of foreshortening are handled with casual ease. The artist apparently has no difficulty in giving the figures a convincing, three-dimensional quality. At first glance it might seem almost impossible to achieve a technical control to equal this, and yet it is not really so hard to draw poses of this kind if you approach the problem by the methods demonstrated in this section. Learn to view the different parts of the figure as cylinders and spheres; then draw these simple forms through to the other side. Master this section carefully, step by step, and you will be surprised to discover how soon you will be able to draw the figure convincingly in any pose you can imagine.

The human form

The human form is one of the most fascinating and rewarding subjects any artist can draw, whether he is an amateur or a professional. Probably you yourself have found enjoyment in sketching members of your family or close friends. You may even have developed the pleasant and very instructive habit of sketching people — on the bus, in a restaurant, or at the beach.

It's only natural that you should want to sketch people. Few subjects interest us or appeal to us more than the men, women, and children we see around us. Artists of all periods have discovered that the human figure offers possibilities for expression that are not provided by any other subject. Glance through any collection of art masterpieces and you will see that artists have always found the human figure one of the most intriguing subjects they could depict.

Much of the emphasis in portrait painting is on realism — on creating portraits that are good likenesses and capture the mood and personality of your subject. There is no reason, however, why your drawings of the figure should be confined to realistic portraits or sketches of a model. The human figure, in one form or another, can become an essential source of inspiration for any kind of painting you may want to do, in any style, including the most abstract.

The human figure in art is often a symbol. It can stand for a lot of things that no other shape could convey. Even when we draw a figure that is obviously not an attempt at a realistic portrait, we are using it to say something in our paintings, whether we realize it or not.

The statues carved by the ancient Greeks, for example, were not realistic copies of living models. They were idealized people invented by the artist. They presented his concept of absolute beauty, and he seemed to be saying, "This is my dream of what the perfect human being should be like — a synthesis of perfect proportions, grace, and rhythm." Because he could imagine nothing more beautiful than these figures, and because he could not find such perfection on earth, he felt that these creations had the quality of gods — they were superhuman in their ideal attributes. It is obvious that the Greeks began with the physical world, and sought the ideal world through a perfecting of the real world which surrounded them.

By contrast, the medieval artist began with spiritual ideals. Instead of trying to present physical beauty, he was concerned with such abstract concepts as love, devotion, self-sacrifice, humility, self-restraint. To him the real physical world, in which he often had a hard and unpleasant experience, was only a temporary affair. Heaven was his home. His art, therefore, celebrates a beauty of the soul instead of the body. For this reason many of the medieval figures were distorted. Often the body was elongated, and the pose tended to be somewhat stilted and formal. The whole approach of the artist to his figures tells us immediately that here is a spiritual concept, pure and otherworldly in its nature.

With the Renaissance the wheel went round again. Men rediscovered the excitement and beauty of the natural world. In this era of exploration and discovery the human figure took on new significance, and artists began to examine the physical body for what it is — a three-dimensional organism of bones, tendons, muscles, flesh, and blood. Painters delighted in a realistic presentation of rippling muscles, or concentrated on capturing the beautiful tints and tones of skin texture. It was a proud, exciting period, when the world seemed suddenly to have been infused with new life. Men were glad to be human, and the artists of the time were fascinated with the business of depicting the human body larger than life in a classic, zestful manner.

Today, once again, realistic painting of the human figure has to some extent gone into eclipse. Artists have turned away from strict academic realism and sought to find their artistic satisfaction in expressionistic styles in which distortion plays a major role. Still others have gone a step further and attempt to avoid any recognizable, natural subject matter in their paintings, concentrating rather on "pure" design relationships of line, color, and abstract or geometric shapes.

It is eternally true, however, that for the painter there is no other vehicle so subtle or so effective for the expression of human thoughts and emotions as the human figure. The artist who has mastered drawing of the human figure can call human personalities to life at will, and depict the specific attitudes, actions, mood, and emotions which will best express the picture story he wants to portray. He can transport the viewer to a world far removed from immediate experience, and enable him to live, momentarily, a richer, more perceptive existence. The great artists

Collection of the artist

PICASSO. Three Graces

In this modern version of a favorite classical theme Picasso has stressed the basic form of the body by modeling it simply in two values. When an artist is *thinking* in terms of form he can accomplish wonders by suggestion. The form is only partially modeled here but we accept its solidity. Notice how the forms gain three-dimensional volume by contrast with the diaphanous drapery and the hair.

AL PARKER. Nude

The solidity of the figure is established as simply as possible, with only the most necessary modeling, because the artist wished to emphasize its outer *shape*. To stress these outer curves he has silhouetted the figure against strong verticals, and reinforced the curves by echoing them in the lines of the chair.

Courtesy Ladies' Home Journal

are dramatists in paint, who consistently help their fellow men bridge the gap between mere surface reality and a deeper understanding of the world they live in. If you hope to become that kind of artist, you must learn to control the human figure for your own purposes.

Secrets of figure drawing

From previous experiments you may have concluded that drawing the figure is an extremely difficult job. We are going to show you that it can be much easier than you think. But you must be willing to progress one step at a time, mastering each step as you go along.

The chief reason most students have trouble with the human figure is very simple: They want to start right off by drawing a fully clothed model in a complicated pose. They spend a great deal of time worrying about details of features, anatomy, and drapery. But in their concern about these details they lose all sense of proportion, construction, and – most important of all – the solid form of the figure.

There is only one sound way to approach the problem of drawing the human figure. You must begin by having a very clear concept of its basic form. The human body is not a two-dimensional symbol on a flat surface; nor is it a paper doll with such decorative details as hair, eyes, teeth, clothes, shoes, etc., drawn on top of it. The human figure is first and primarily a three-dimensional object, a solid object with bulk and weight. It is certainly as three-dimensional as a piece of sculpture in wood, marble, bronze, or steel. No matter what your style is or what direction your painting finally takes, a thorough understanding of the solid form of the figure is absolutely essential.

The solid form of the human body looks complex. It is obviously not a single sphere or cube or cylinder. But when we examine it we discover that this complex form is actually a construction of very simple forms. These simple forms are closely related to the spheres and cubes and cylinders you learned to recognize and draw earlier. If you can draw those forms well, you will have no difficulty putting them together to make the total human form.

In this section we will show you how to analyze the human figure in terms of these simple, basic forms. We will show you what the proportions of these individual forms are in relation to the total form. We will illustrate the methods by which these individual forms are connected, and demonstrate how the parts move. In other words, we will explore the basic construction of the figure. We will also explain how the form changes as it develops from child into adult, and show you how to draw it at different stages.

Once you have learned to control the basic form, the rest will be fairly simple. But don't give in to temptation and rush right on to attempt sketches filled with anatomical details. Later we will study simple anatomy and the special problems involved in drawing individual parts of the body such as the head, the hands, and the feet. Concentrate for the present on the basic form figure until you can do anything you want with it. Draw it in as many positions as possible. Look for it in photographs of people, in paintings, and above all in the people you see around you.

The information presented in this section is so important that it is not enough for you merely to read it. We suggest that you learn every detail thoroughly. You can do this most effectively simply by making dozens of drawings, both while you are studying this section and afterward, in your spare time. Most of these practice drawings can be done in just a few minutes. Practice of this kind will help train your hand and your mind in the proportions, construction, and relationships of the individual forms so that you will never forget them.

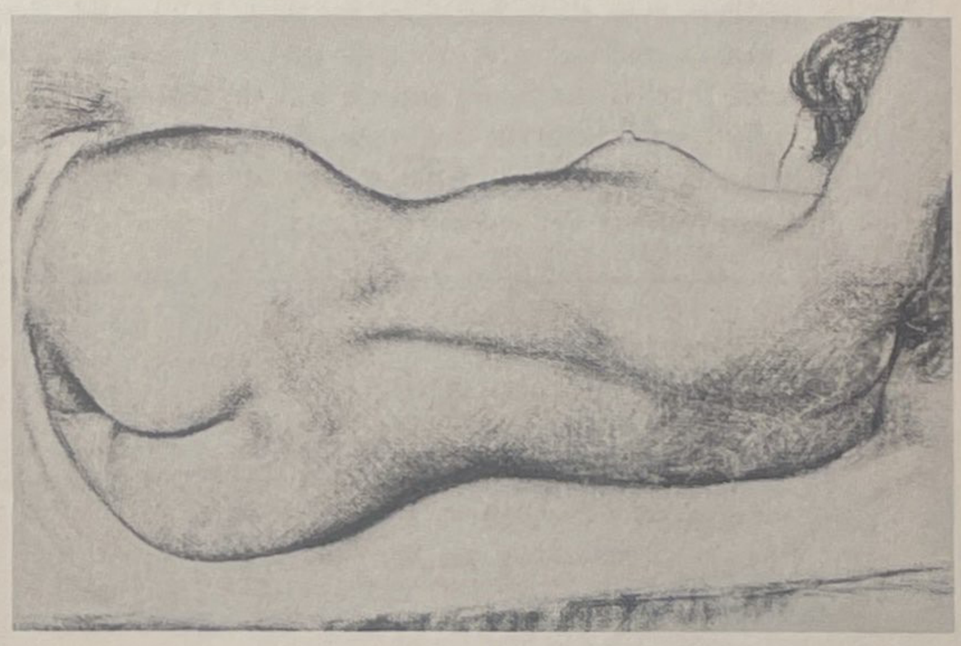
These essential facts about the human form are as basic and invaluable to you, as an artist, as the knowledge of words is to the writer. You will be drawing the human figure the rest of your life, so build your knowledge and control of it as solidly as you can. You will find the rewards well worth the effort.

Collection of the artist

BOARDMAN ROBINSON. Nude

Through careful generalization and modeling, the artist has given the individual forms of the body a feeling of swelling solidity. Dark moving edges serve to contain these forms, give the drawing life, and emphasize the organic unity of the figure.

Courtesy of The Art Institute of Chicago

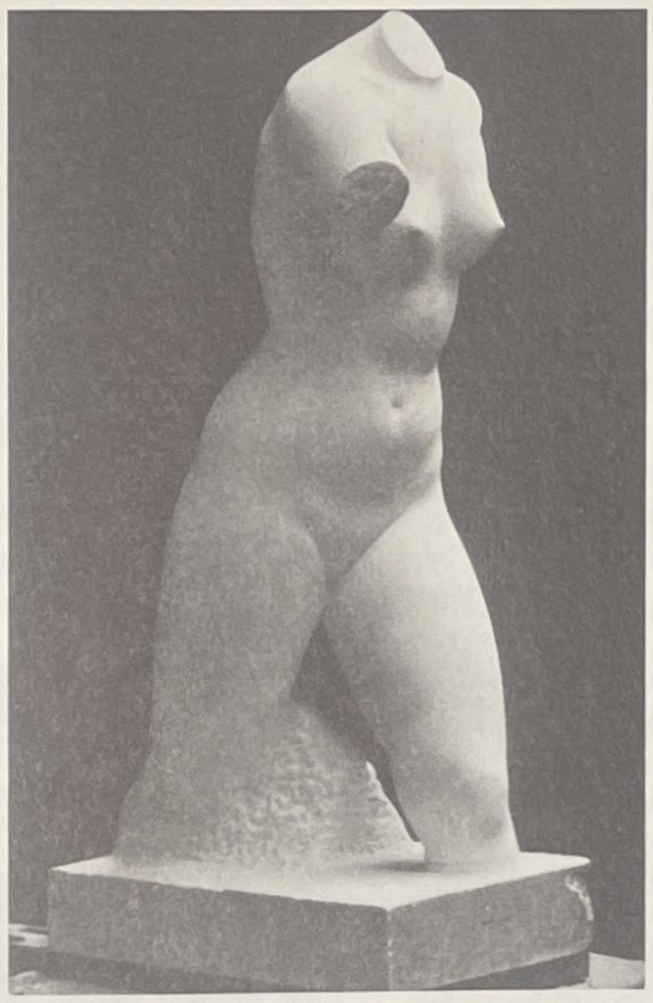


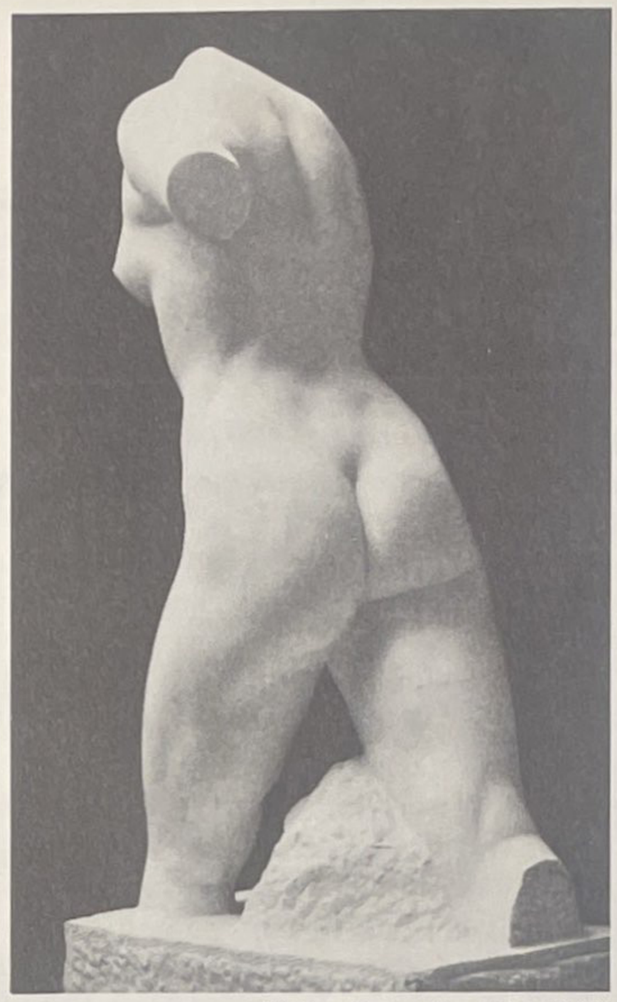
MAILLOL. Reclining Nude, 1932

The figure is in repose, but there is strong tension in the twisting relationship between the upper and lower body. The forms are large and very solid, but modeled with the greatest subtlety. The very volume of these forms adds to the effect of bursting life felt in the strong, moving lines which contain the figure.

PICASSO. Mother and Child

A feeling of impassive monumentality characterizes this sculpturesque composition. Mother and child are presented as basic forms; the figure group has the quality of a "composition of cylinders." The modeling is exceedingly simple, in many areas no more than suggested. The forms seem very solid, however, because they are set against a background of completely flat planes.





Walking Torso Max Kalish, A.N.A.

The figure is a solid form

The human figure is a solid form. It has bulk and weight, as a rock has bulk and weight. The figure has depth and thickness as well as height and width. It exists in three dimensions.

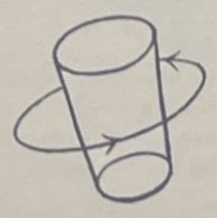
In the front and rear views of the walking torso above, the sculptured form has all the solidity and mass of a living figure. Looking at either view, we feel that the other side of the form is there even though it does not show. The solid, simple forms exist so convincingly in depth that we know we have only to walk around the figure and we will see the other side.

Whether the artist constructs the human body out of clay or stone or draws it on a flat surface, he must always think of it as a three-dimensional object. Paper lacks the third dimension of depth, but we can still create the feeling of depth in the figures we draw on it. The best way to do this is to "draw through" the solid forms of the body. These are all basic forms. We can see some of them – modified cylinders – in the cut-off neck, arms, and legs of the statue.

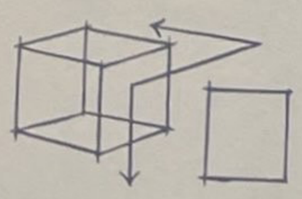
If you draw the basic figure simply as a flat outline, all you are likely to produce is a flat-looking figure. But if you think of, and draw, the simple solid forms as they actually exist in depth, you will be well on the way to creating figures that come to life on paper. Always remember: The figure is a solid form.

The terms we use

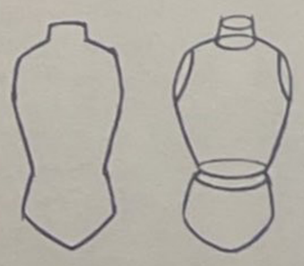
You will find that the terms explained below are used frequently in this and the following sections, as well as in our letters of criticism. Study the definitions carefully, and refer back to them from time to time if necessary.



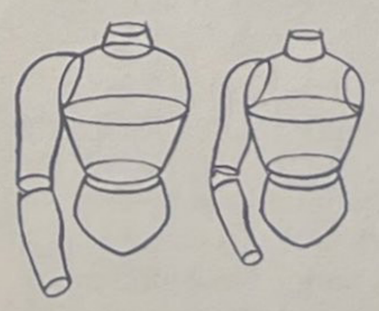
Drawing through: The glass at the left has been "drawn through to the other side"; all the structural lines can be seen. In the same way, you must sketch in all the structural lines when you are drawing a solid, opaque object, whether you can actually see them or not.



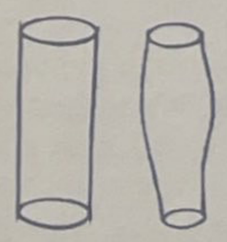
Three-dimensional: The square at the immediate left has only two dimensions — height and width. To make objects seem three-dimensional, you must also draw in depth, as shown in the three-dimensional cube at the far left.



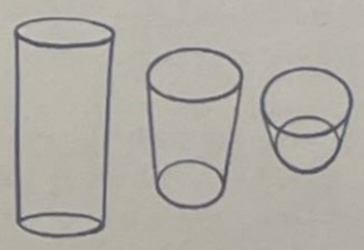
Construction vs. outlining: An object that is "well constructed" has depth, as well as height and width. If we say that the construction of your drawing is bad, we will mean either that you have merely outlined your forms, forgetting about depth, or you have made mistakes in the basic structural lines.



Proportions: Each separate form in the drawing at the extreme left is properly proportioned, but the different forms are not properly "related" to each other. The upper arm and the lower arm are drawn in a scale quite different from the one used in drawing the torso. Make sure that the individual forms have the right proportions; also make sure that when those forms are put together they have the proper relationship to each other, as in the drawing at the immediate left.



Modified cylinders: The cylinder at the far left is a geometric object, perfectly regular in shape and proportions. The tapered cylinder next to it is essentially the same basic cylindrical form, but the shape has been modified slightly. This is what we call a "modified cylinder."



Foreshortening: When an object is tipped toward you or away from you, it is said to be "foreshortened." It seems to diminish in size and change in shape as it goes back. In the case of the cylinder, notice that the sides become shorter and the ellipses more open as the foreshortening is increased.

The drawings in this section through page 16 are essentially diagrams. Their main purpose is to show you the solidity of the human figure and to encourage you to always think of it in three-dimensional terms.

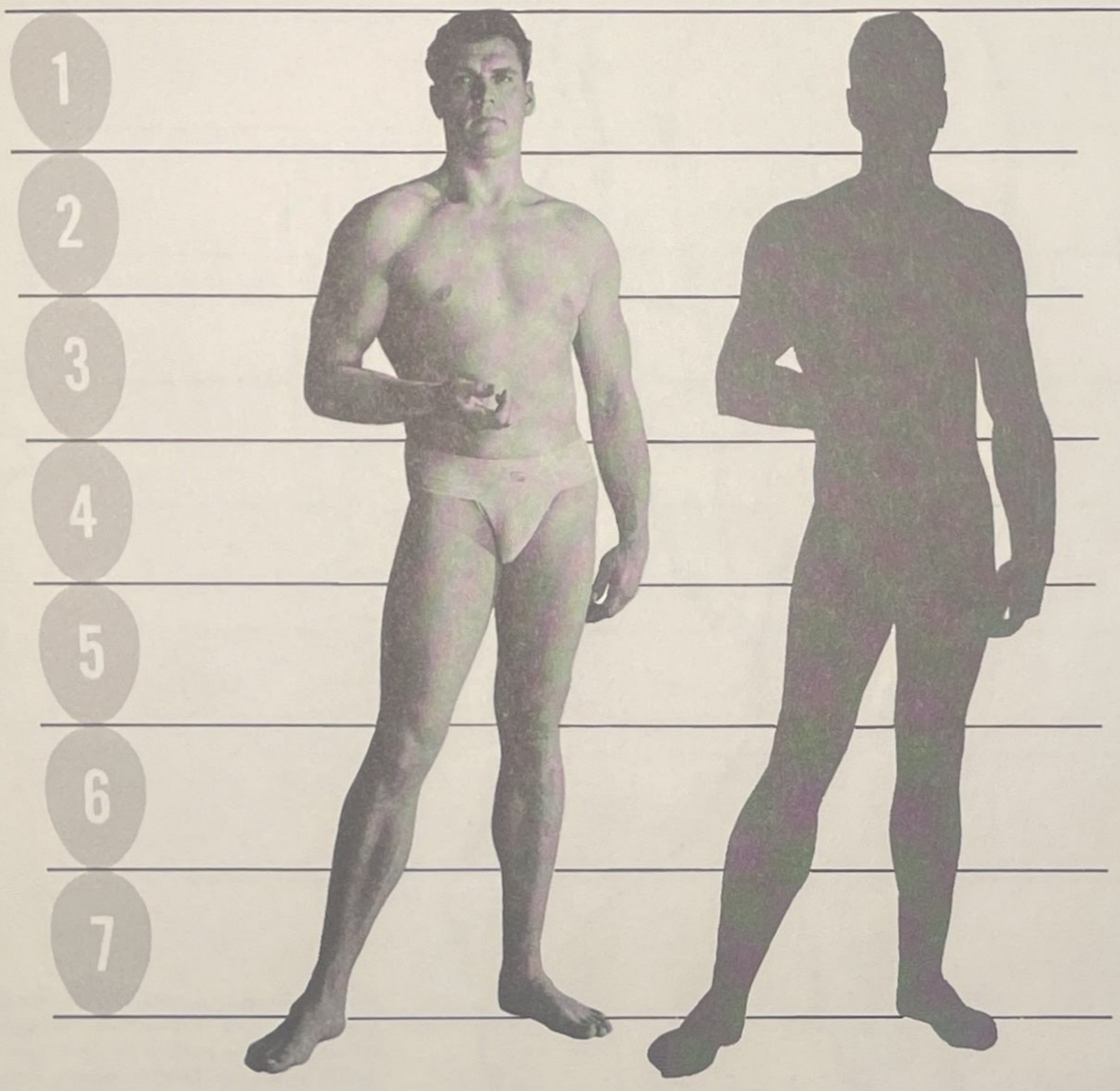
We do not want you to copy the rather precise lines in these diagrams when you make your own drawings. Instead, we want you to use the same kind of freedom you see in the drawings starting on page 17. Remember that your drawings should always be well proportioned and constructed, but at the same time reflect your own personality — just as the drawings on pages 24-25 reflect the personalities of the men who made them.

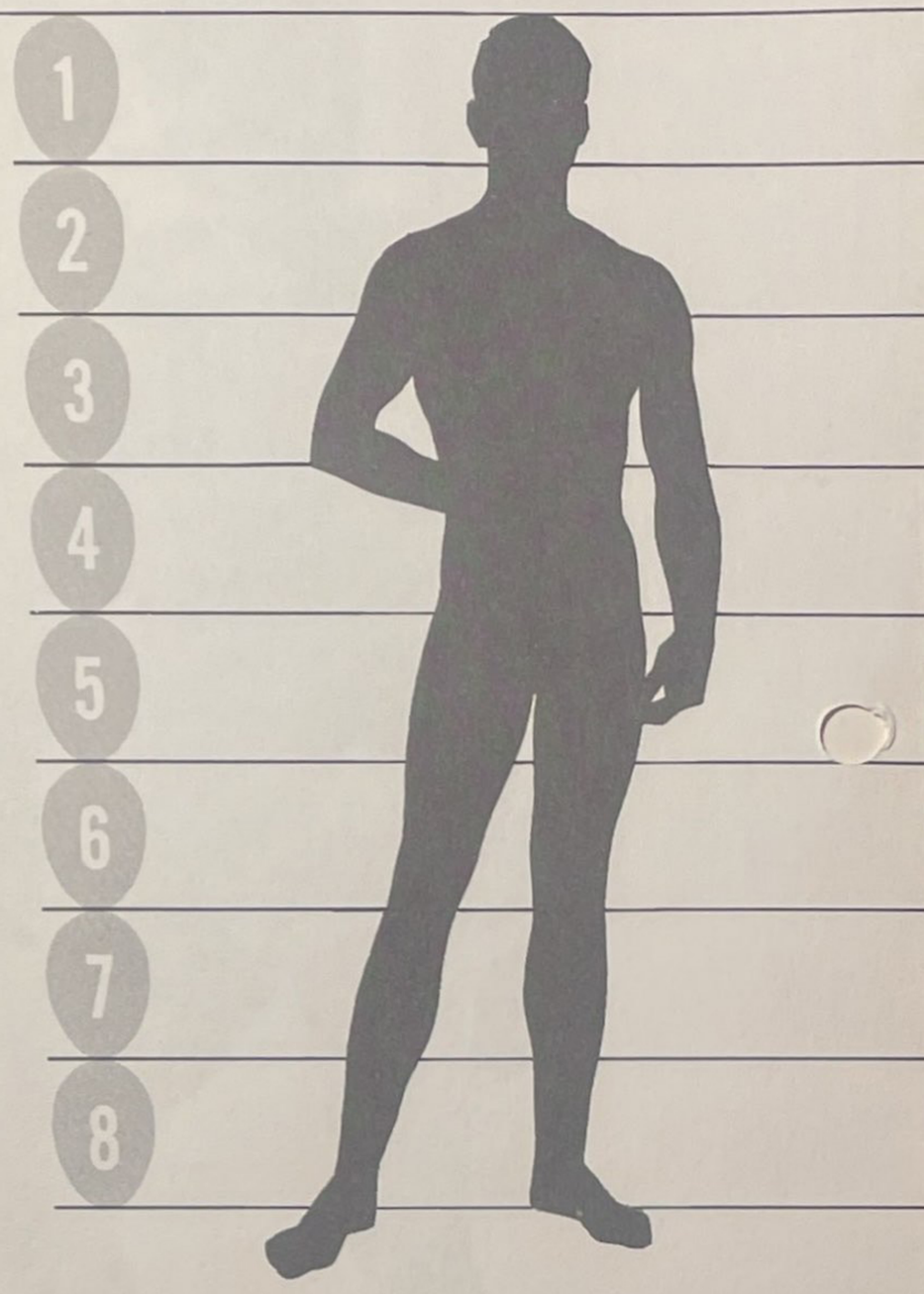
The basic form figure

The drawing at the right shows you the simple basic forms that make up the larger form of the human body. Every distracting detail has been eliminated — only the important forms remain. These are the head and neck; upper torso and lower torso; upper arms, lower arms and hands; upper legs, lower legs and feet. Think of each form of the figure as if it were carved out of something solid. Don't forget that form has three dimensions and that it occupies space.

Let's compare the form figure with the photograph of the living model to the left. Are the model and the basic form figure similar in basic mass and construction, with the same association of parts? Yes. In both model and form figure the neck, the arms, the legs, and the torso are essentially modified cylinders, similar to those you learned to draw earlier. The head is basically a simple sphere. The hands can be reduced to cubic forms, while the feet are combined cone and cube forms.

It is extremely important in the beginning to view the body in terms of these simple, basic forms, understanding the essential masses of the separate parts, and placing these in their proper proportions and relationships. For the present you must ignore hair and features, as well as the more subtle curves resulting from underlying bone and muscular structure. Once you can control and draw the basic forms properly, you will have little trouble drawing the details of these forms.





1 The head is the basic unit by which the figure is measured. In the head-unit "ruler" above, the vertical height of the head is used to make vertical measurements of the body. Thus we say that the model at the right is a "seven-head" figure.

2 This model is a man of average height and good physical development. His total height is seven times the height of his head. If you ran into him accidentally in real life you would consider him well-proportioned. Yet when we draw him on paper, as the silhouette demonstrates, he seems to be much broader and stockier than most Americans think the "ideal" man should be.

3 In the ideal figure the body is eight times the height of the head, as we have diagramed above. Notice that although the total height of this eight-head figure is the same as that of the seven-head figure at the left, the size of the head has been reduced in the eight-head figure. All the other parts of the figure have been elongated proportionately, so that the figure now seems slim and graceful.

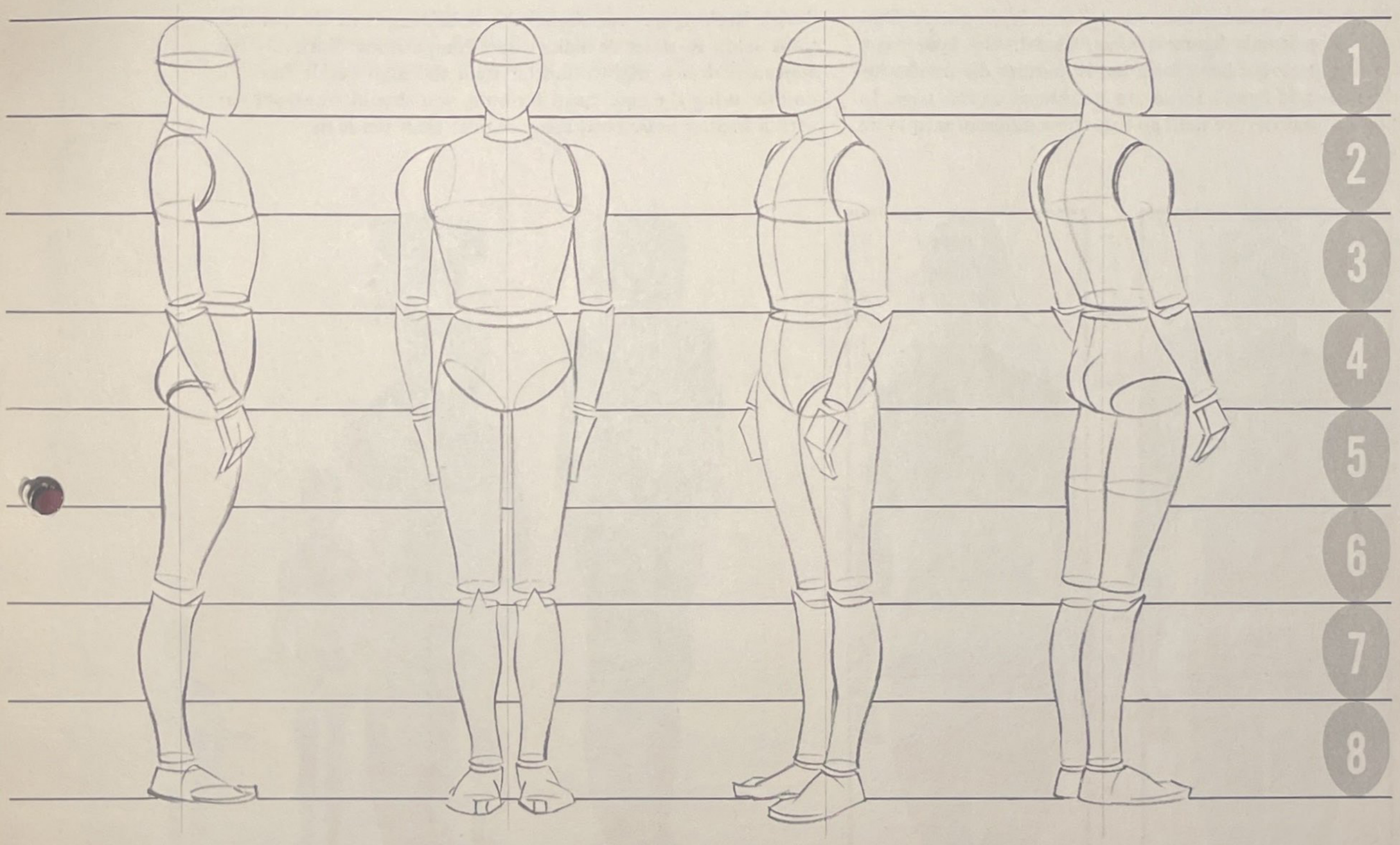
1. Proportions

The artist uses the human head as his basic unit of measurement for the entire human figure. The head can be viewed in two ways, however – in terms of its height and its width. The height of the head from chin to top of skull is the ruler by which all vertical measurements are made. For example, the artist speaks of an "eight-head figure," by which he means that the figure is eight vertical heads high. It is more convenient to use the width of the head in making horizontal measurements. The shoulders, for instance, are three head widths across.

If you look at the people around you in real life, you will see that they differ considerably in proportions. One man has a head which we think is large for his body, another has a head which seems smaller than normal. The great majority of people, however, are reasonably similar in proportions and shape at any given age. It is because of this fact, of course, that it is possible for clothing manufacturers to design "ready-made" suits and dresses. Most people can be fitted into standard patterns successfully with only minor adjustments.

On this basis we could easily arrive at average proportions for the adult figure. There is a distinct difference, however, between the "average" and the "ideal." Artists have always sought to discover the ideal, the perfect figure. The Greek sculptors, for example, established a "canon" for the human figure. This canon was a set of proportions for the ideal figure. In the same way later artists, such as Leonardo and Dürer, set up their own canons of proportions for the ideal figure. In many respects the concept of the ideal changes from nation to nation, and from period to period. The hefty, voluptuous beauties of the Rubens murals were much admired in their day, when women were considered beautiful only if they had monumental proportions. Today popular taste has swung in the opposite direction.

What the public at large considers beautiful, and what we artists consider beautiful, may be quite different things. It is our privilege to set up our own canon of proportions. This canon need not necessarily be the same as the measurements of the present-day average man or woman. In the photograph the model



Here the eight-head figure is presented in basic form, as seen from side, front, three-quarter front, and three-quarter back views. Study the relationship of the different parts of the figure, noticing how they are balanced on the vertical axis.

is a well-developed male of average height. He is a "seven-head figure." Most people today, however, do not consider a seven-head figure tall enough to satisfy their concept of the ideal. They prefer the eight-head figure, which they feel is handsomer and more elegant. Since we must establish some point of departure, we have chosen the eight-head figure as the standard for this Course, in the belief that this selection will meet with the approval of the majority of our students.

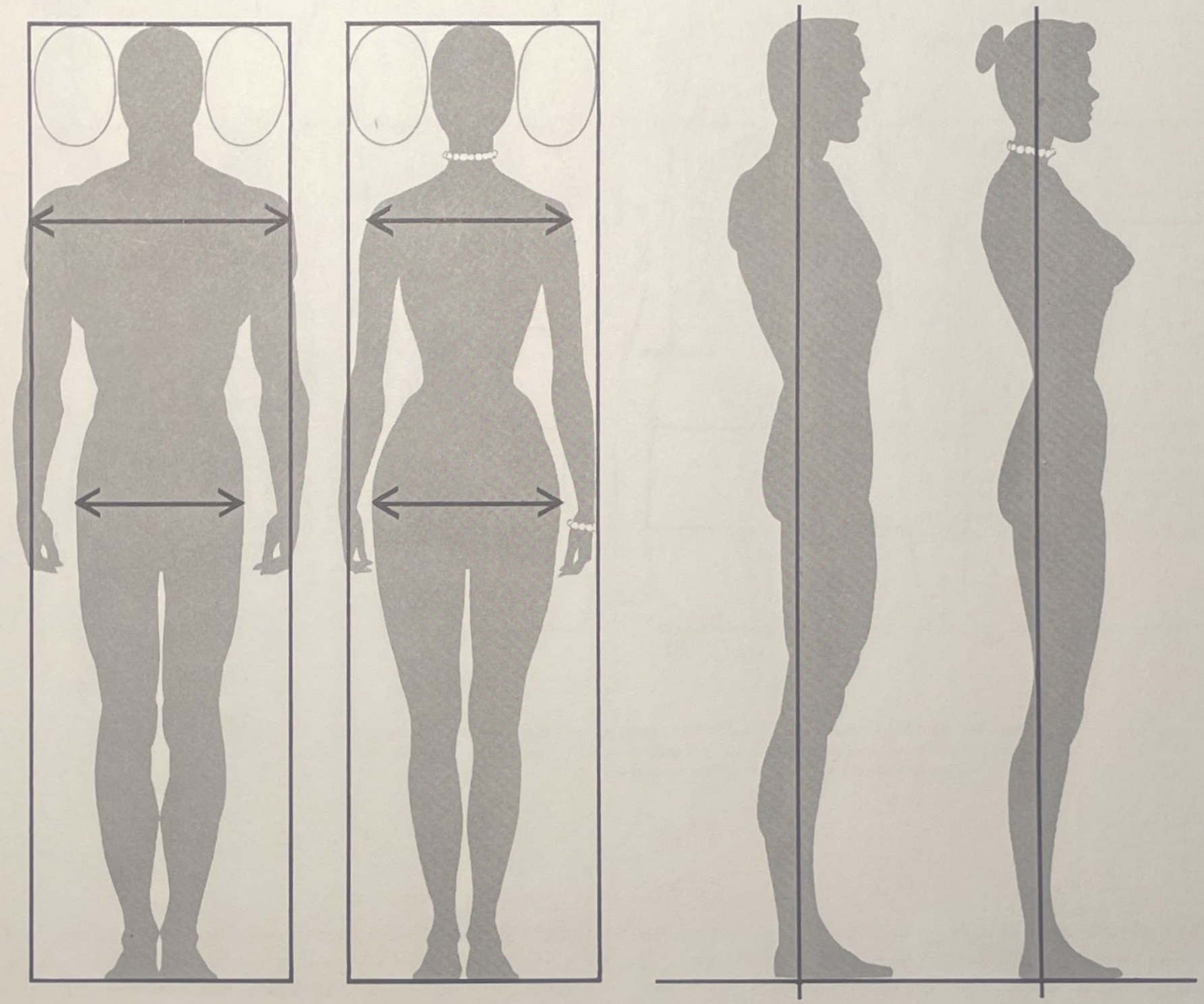
On the right-hand side of the facing page you will see how the eight-head figure looks. To make this figure the same height as the seven-head figure we divide the height into eight parts. One of these parts serves as the basic head measurement unit. After drawing in the head, we position the other parts of the body along the vertical axis. The body alone, from neck to feet, now measures seven head units, instead of six. The parts are all slightly elongated because of this, and as a result the figure seems much better proportioned.

The eight-head figure is today considered the "ideal." It is this set of proportions which we will expect you to follow throughout the Course, unless we specifically request different proportions. Occasionally you will want to draw people who are obviously not average. If you want to caricature a person, or show that he is shorter than average or taller than average, you can do this very easily by retaining the same width measurements used to draw the eight-head figure, but reducing the height to five or six heads, or increasing the height to nine or ten heads. However, any departure from the eight-head formula should be deliberate. The drawings above show you how the eight-head basic form figure looks in different views.

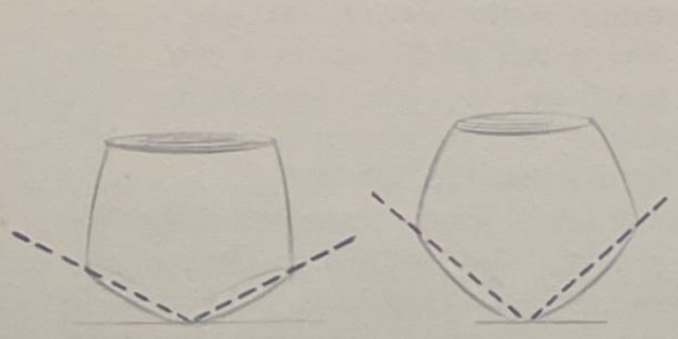
Rely on your eyes for correct proportion. The head as a unit of measure is convenient and helpful while you are first learning figure proportions. You must realize, though, that you do not make figure drawings with a pair of dividers or a ruler. You make them with your pencil and your eyes! Actually, the only time you can literally measure the body and see how many heads long it is, is when the figure is standing bolt upright, in a position of attention. Any other time – which means most of the time – the figure or parts of it are foreshortened to some extent. Therefore, the only way to gauge proportions is with your eyes. If it looks right it is right. By all means study the chart above and fix in your mind the size of one part of the body compared with another, but put your ruler away when you start to draw. Never forget for a moment that skillful drawing is simply skillful seeing, transferred to the surface of your paper.

Structural differences—male and female

Up to this point we have presented the male figure proportions exclusively. The female figure is constructed in the same manner, following the eight-head formula. Important differences between the male and female forms are considered on this page. In the section on anatomy we shall go into these differences in more detail. Both figures are shown the same height in the illustrations below in order to make direct comparisons. Normally the woman is drawn slightly shorter than the man beside her. To do this, using the eight-head formula, you should construct her with a smaller basic head measurement than the man.

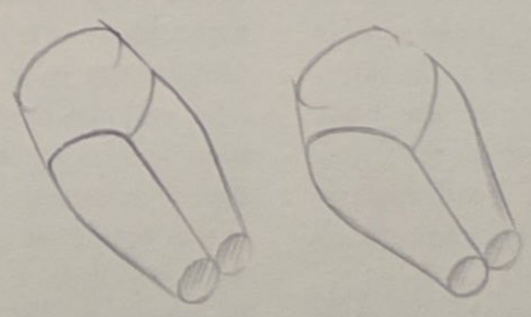


Study the diagrams above, comparing the male and female forms point by point. Notice that the man's shoulders are fully three heads wide; the woman's are much narrower. On the other hand, the man's hips are much narrower than his shoulders, while the woman's are about the same width as her own shoulders. The woman's shoulders also taper much more than the man's. Her arms, wrists, and fingers are smaller and thinner than the man's, and her lower legs taper to thinner ankles and smaller feet. The female breasts are two simple half-spheres, the bottom line of which is about one-third of the way down from the top of the shoulder to the crotch. The male's nipples are placed about two head-lengths from the top of his head. The female nipples are slightly lower.



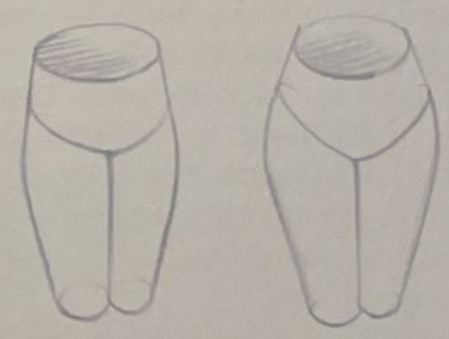
Male Female

Comparing the hip structure in man and woman: The female hips are broader than the male, and where her legs join her body there is a much sharper angle.



Male Female

The woman has a narrower waist than the man, and the angle from the waist to the widest point of the hips is much sharper in the woman's figure.



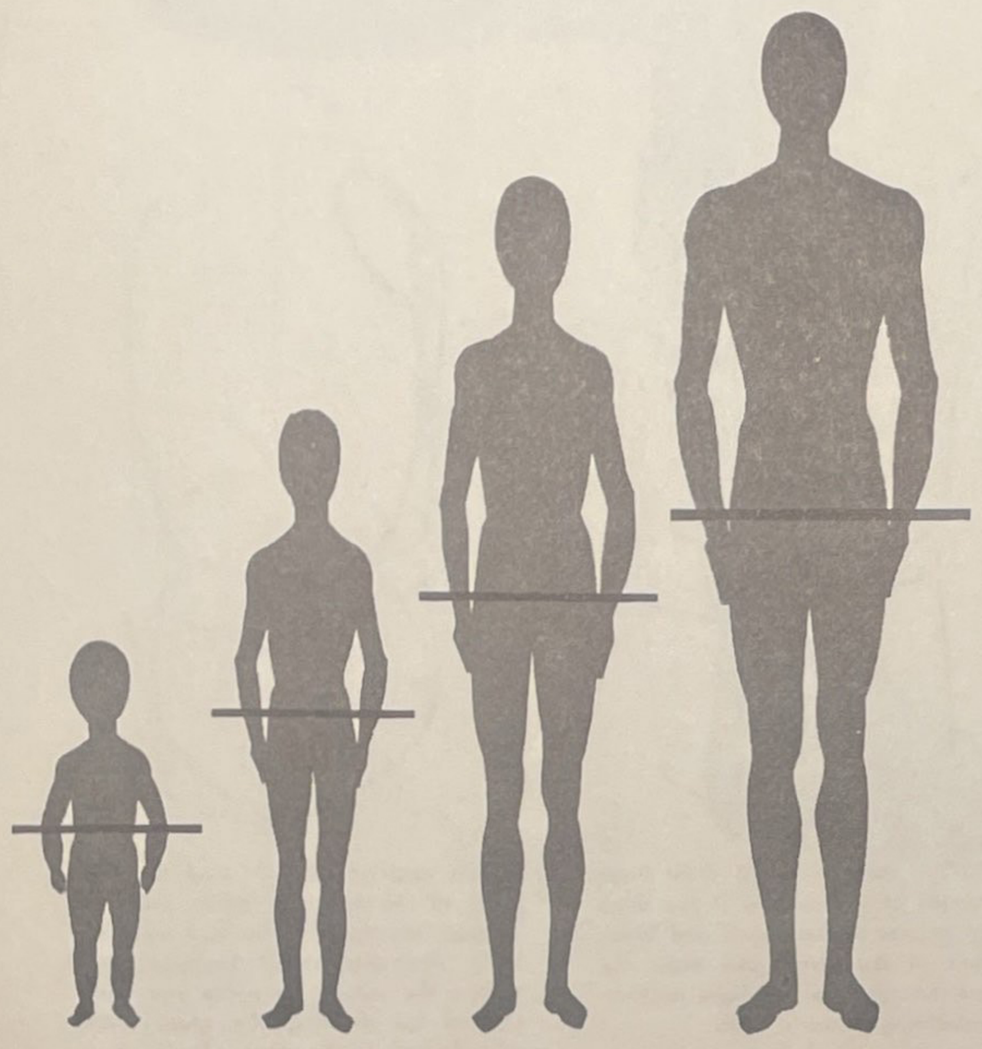
Male Female

The upper thigh is clearly much thicker in the woman. Notice that the outer curve from waist to knee is much more prominent than it is in the male.

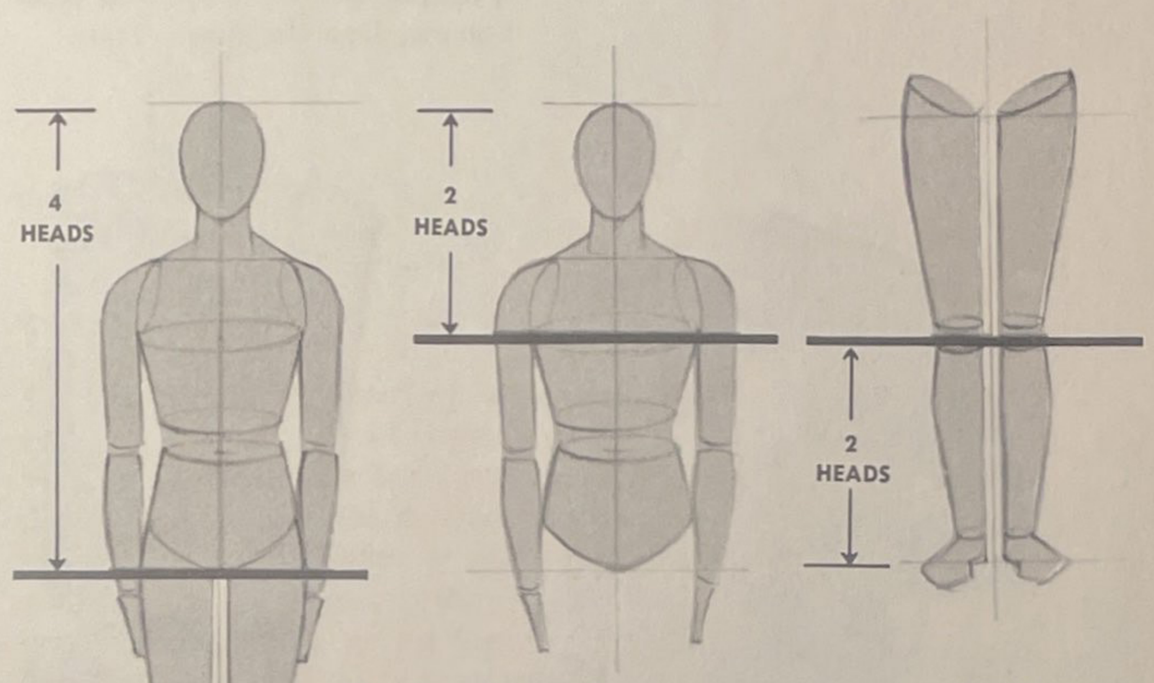
Relative proportions at various ages

When a child is born, some parts of its body are much further developed than others. Its head, for example, is quite large as compared with the length of its arms and legs. By the time the baby is a year old, his body from neck to feet is about three and one-half times the length of his own head. In other words, he is about four and one-half heads high. His legs are still quite short compared to the length of his head and torso; the center of his body is at a line through the stomach, rather than the crotch.

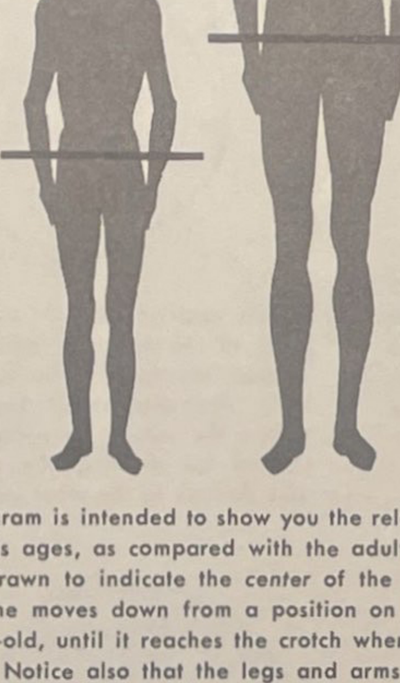
As the child grows older his legs and arms become much longer. By the time he is eight, the center of his body has moved down to a line above the hips. At the age of twelve, he is about seven heads high, and the center of his body falls at the crotch. From this time on, until he becomes a full grown adult, he broadens out in addition to becoming taller.



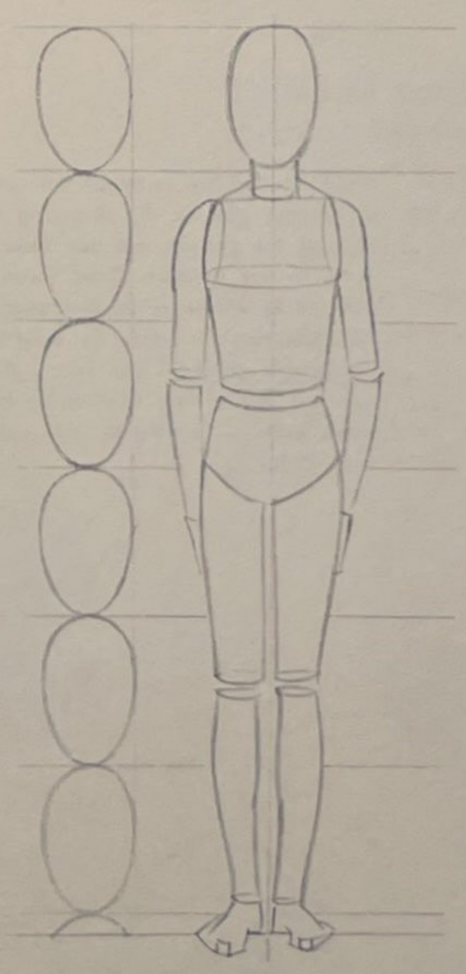
This diagram is intended to show you the relative height of children at various ages, as compared with the adult figure. The horizontal line is drawn to indicate the *center* of the figure. Notice how the center line moves down from a position on the lower chest of the one-year-old, until it reaches the crotch when the figure is fully developed. Notice also that the legs and arms grow much more than any other part of the body, while the head size changes quite slowly.



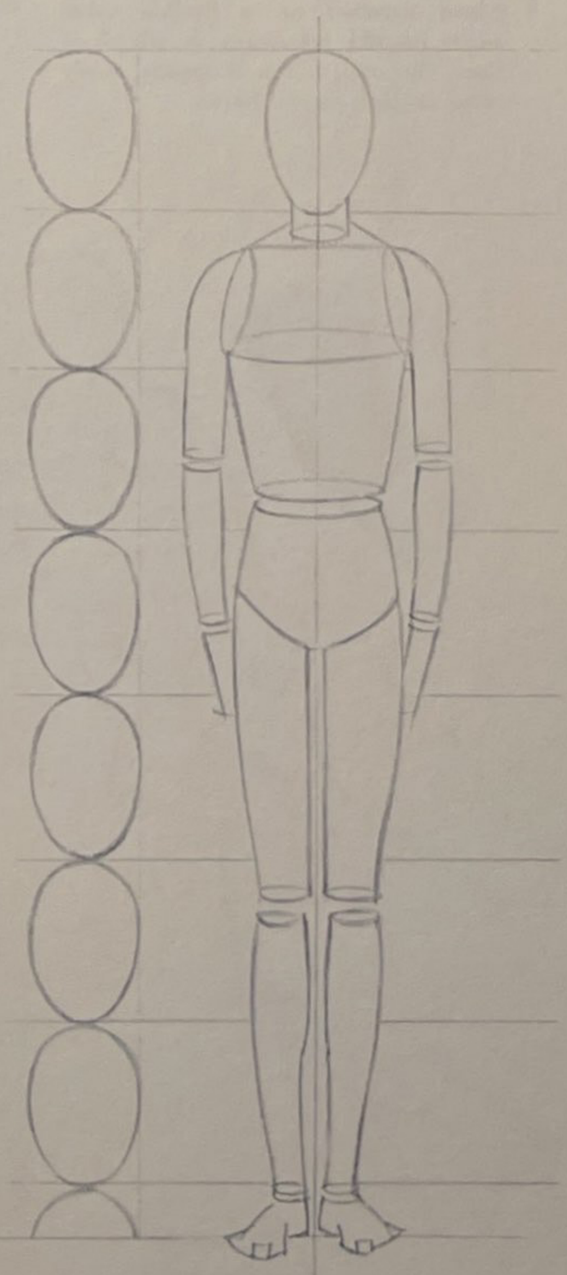
These three diagrams show you some important points about the relative proportions of the adult figure. Notice, at the left, that a line drawn across the crotch divides the whole figure in half. In the center diagram, a line drawn across the nipples and just below the armpits divides the upper part of the figure in half. At the right, you see that a line drawn across the knees divides the lower part of the figure in half.



The one-year-old must be measured in terms of his own head, of course. Using this head size as a measuring unit, he is about four and one-half heads high. Study the points at which the head measurements fall on the various parts of the body so you can give them the right proportions.



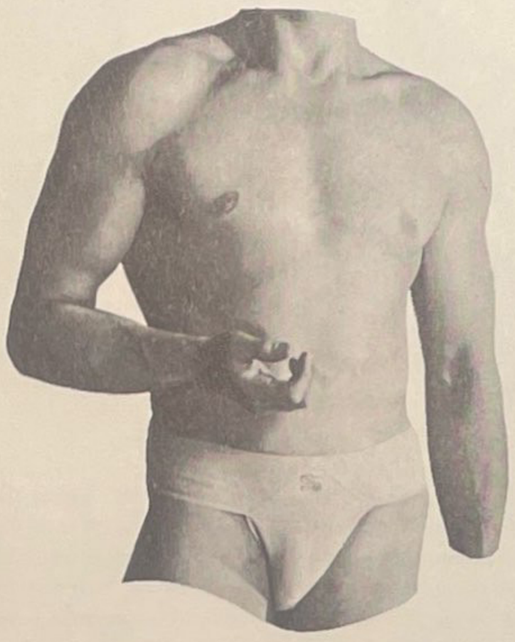
By the time the child is eight years old, the head has grown somewhat larger. The eight-year-old can then be considered six and one-quarter heads high. Always remember that there is no absolute head measurement; each figure must be measured in terms of its own head size.



The head of a child twelve years old has again grown, and we measure the new figure in terms of the new head size. The usual twelve-year-old is about seven heads high. The center of the figure is now at the crotch. From this time on, all body parts develop at about the same rate.

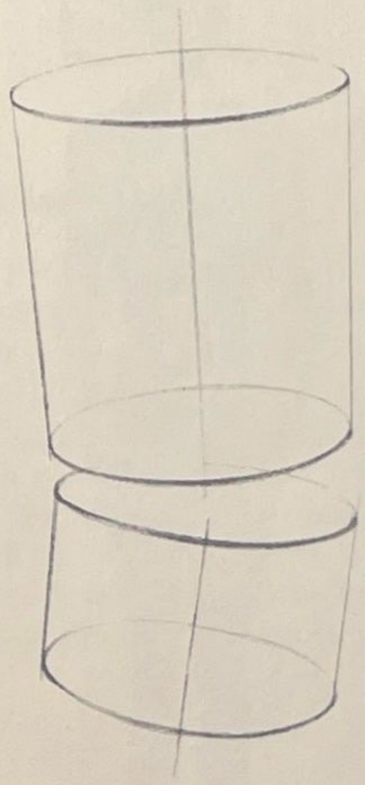
2. Construction

In an earlier section we explained how helpful it is to reduce all objects to their simple basic forms of cube, cone, sphere, or cylinder. This can be done even when the object seems quite complicated. On these pages we will demonstrate how to think of the torso, arms, and legs as modified cylinders, the hands and feet as cubic shapes, and the head as a simple sphere. If you can draw the basic forms you studied earlier you can draw the human body.



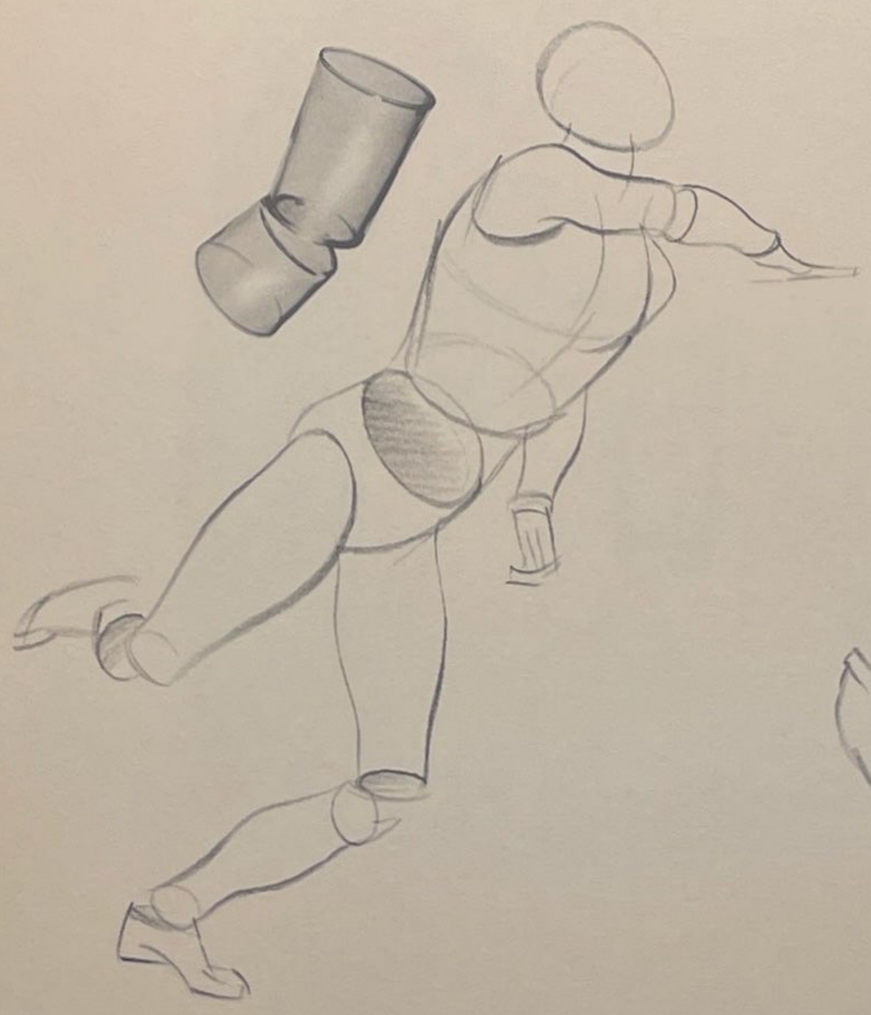
1 The human torso is essentially two forms joined together on a flexible spine which permits movement in all directions. The upper form is approximately twice as high as the lower.

2 In order to visualize the relationship of these two forms, get two ordinary tumblers, one twice as high as the other. Like these two glasses, the two forms of the human torso are essentially simple cylinders.

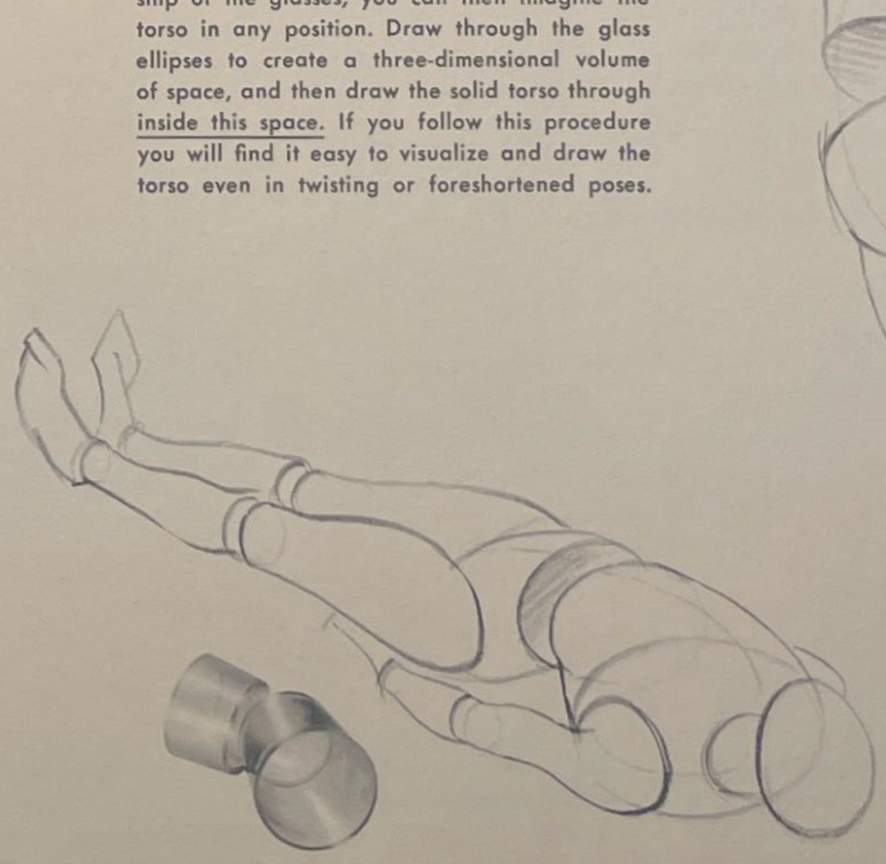


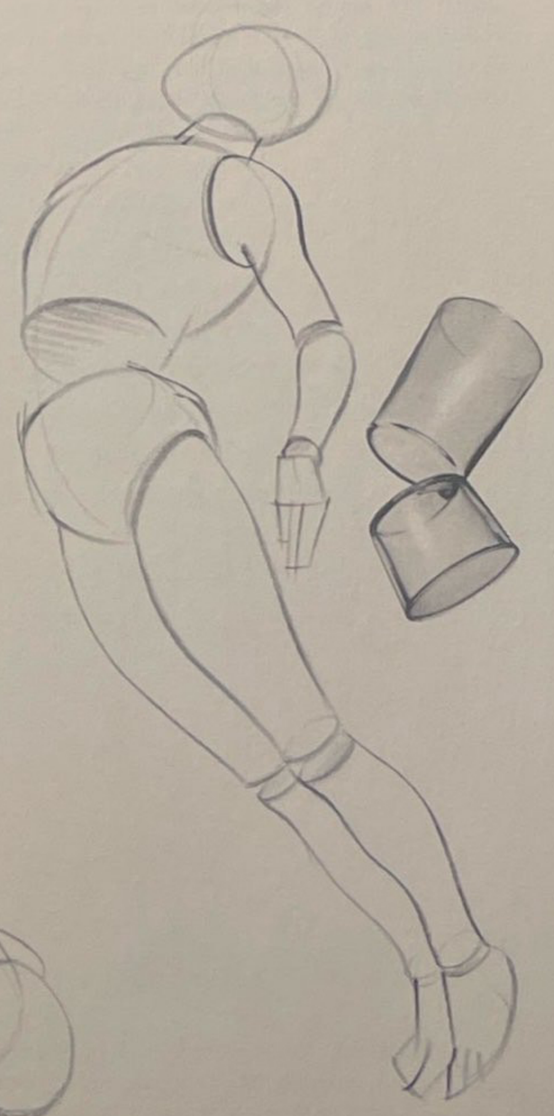
3 This is the way we would draw these two simple glass cylinders. If you think of the glasses as the upper and lower portions of the torso, and draw the glasses through, you will have no trouble visualizing the torso itself.

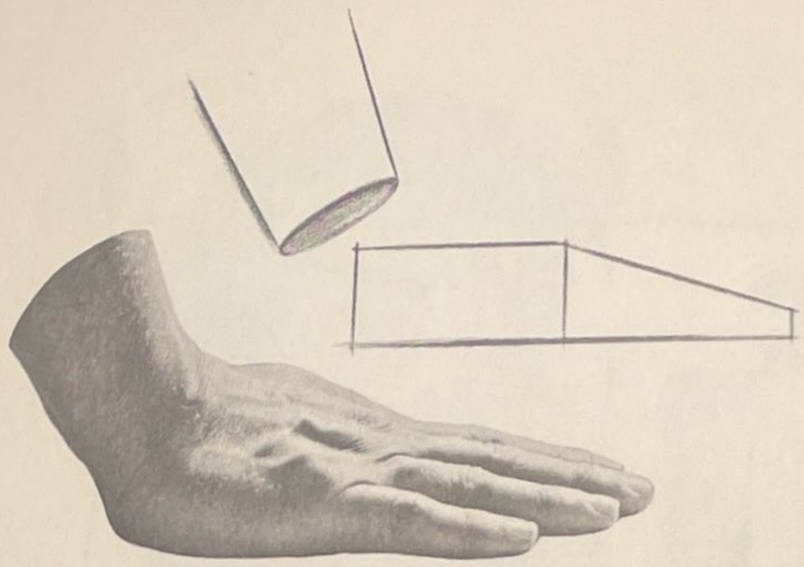
4 In this drawing you see how the two parts of the torso fit inside the two glasses. The torso forms look convincingly three-dimensional because they occupy the volume of space you have created by drawing the glass cylinders through to the other side.



Think of the two parts of the torso as fitting inside the glasses. By changing the relationship of the glasses, you can then imagine the torso in any position. Draw through the glass ellipses to create a three-dimensional volume of space, and then draw the solid torso through inside this space. If you follow this procedure you will find it easy to visualize and draw the torso even in twisting or foreshortened poses.

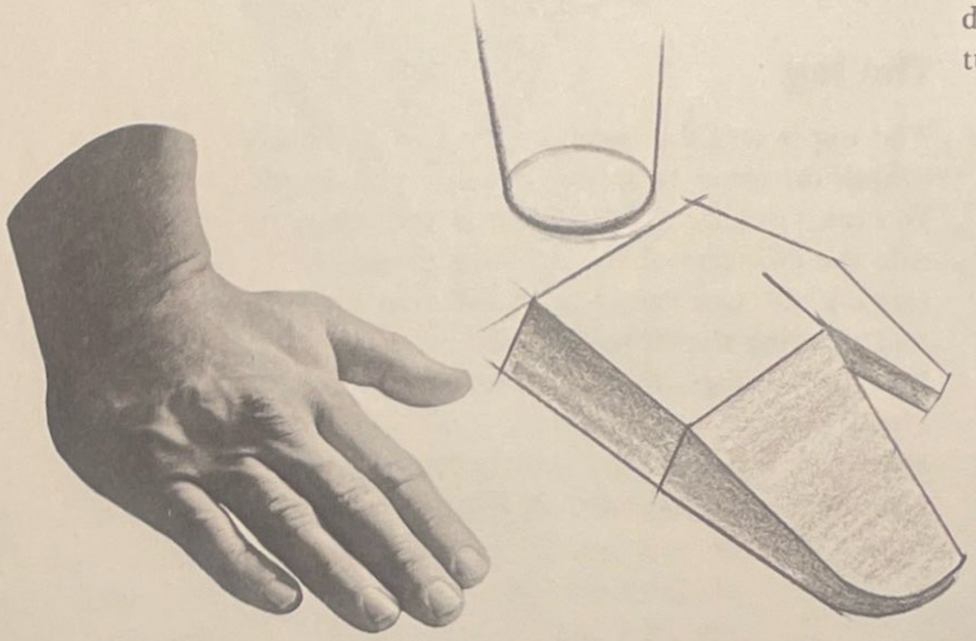


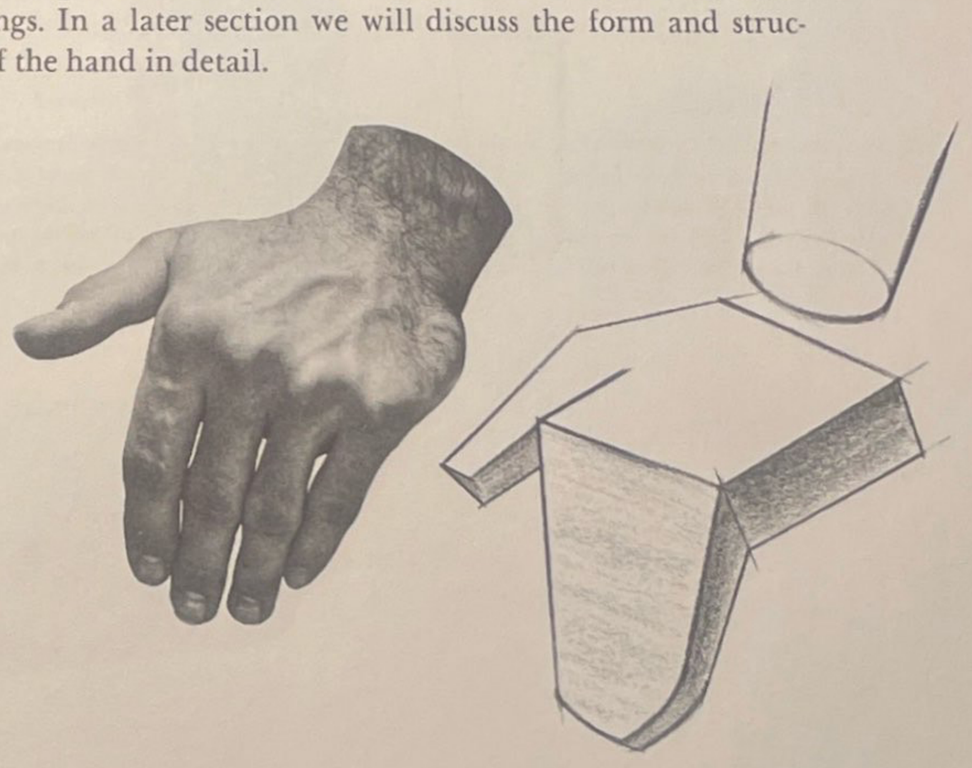




The hand

The hand, like the foot, cannot be reduced to a single basic form quite as easily as can the other parts of the body. However, it may be interpreted for the present as a combination of simple forms which represents the real hand with reasonable accuracy. At the left it is treated as a wedge-shaped form divided into two sections. The upper, broad section of the form symbolizes the palm; the lower, tapering wedge suggests the mass of the fingers. The wedge of the palm, viewed alone, is a nearly perfect square. The finger wedge is about as long as the palm wedge. The visible part of the thumb is about the length of the little finger. This simplified presentation of the hand will serve for our basic form drawings. In a later section we will discuss the form and structure of the hand in detail.





The foot

The foot has the same essential structure as the hand, with the important difference of proportions. It is approximately as long as the head is high. The upper portion of the foot can be reduced quite logically to a cone that has been cut off at the point where the top of the foot meets the ankle. This cone is not symmetrical; the back rises almost straight up, while the front is quite slanted. The toe form and the entire sole of the foot are best considered a thin cubic form. This approach to the foot will serve for your present drawings. The important thing now is to realize that it is a solid, three-dimensional object. You will study the actual foot in detail later in the Course.

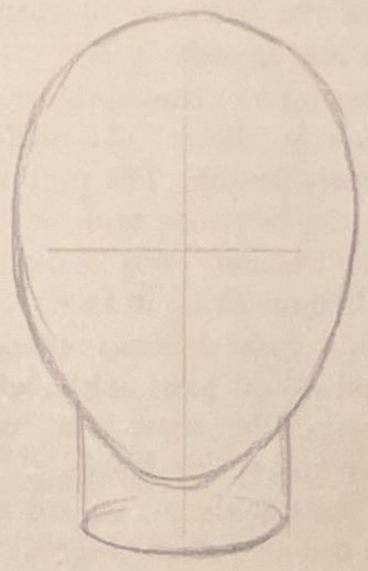
The head

Of all the parts of the human body, the head is undoubtedly the most important from the viewpoint of the artist. In later sections we will make a thorough study of the head and how to place and draw the features and the hair. For the present, however, it is extremely important for you to think of the head only in terms of its essential solidity and mass, and keep the features quite simple.

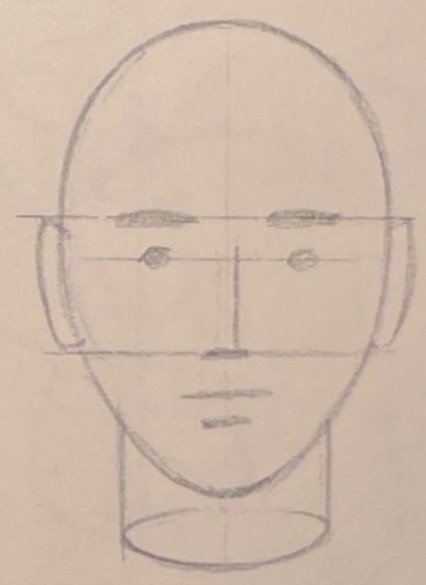
The basic form of the head is a sphere – actually, more of an egg form – set on the cylindrical column of the neck. The nose and ears are not part of the basic egg form: they project from the surface.

At the right we explain the placement of the features and show their relative positions as seen from the front and from the side. Notice that the egg head is slightly different in the side view and that it is tilted.

Front view



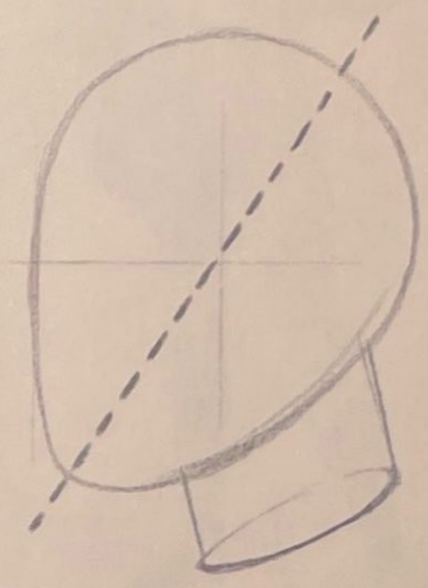
1 The head is an egg-shaped sphere with the narrow end at the bottom. It rests securely on the neck, which is a short cylinder. The horizontal and vertical center lines are guide lines for placing the features.



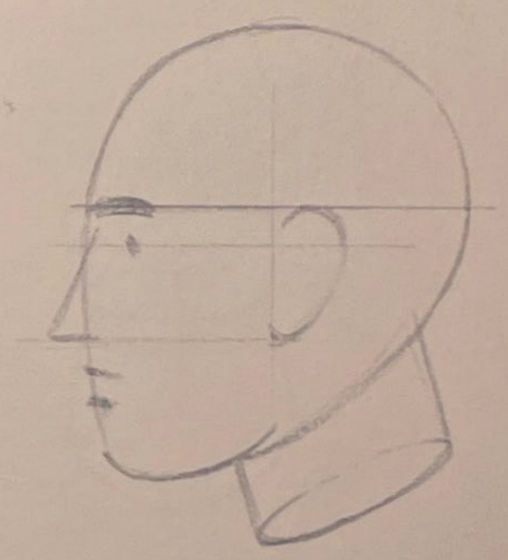
2 The eyes are located on the horizontal center line, the eyebrows on another line a little higher. The nose extends from this line halfway to the chin. Top of ears lines up with brows, bottom with base of nose.

3 The hair extends slightly out from the skull, and the hairline runs down on the forehead. The nose is a wedge shape with planes. The egg is modified so it has side planes too.

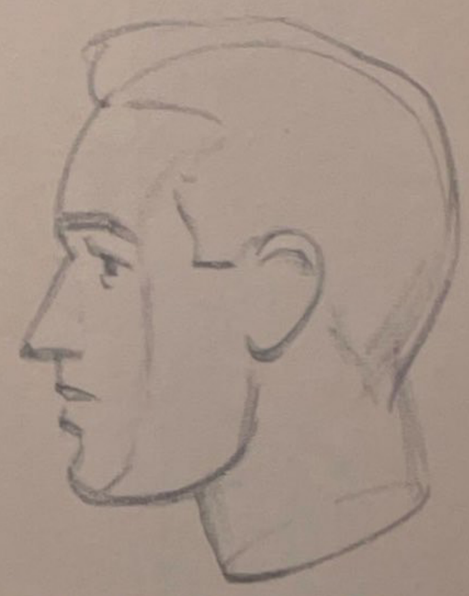
Side view



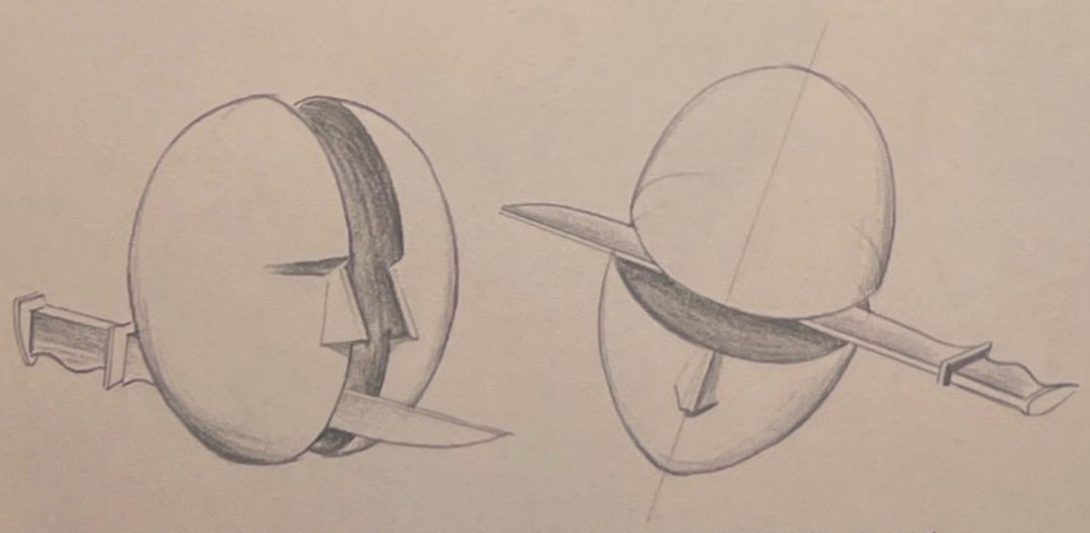
1 The form is wider at the top and narrower at the bottom than in the front view. Note that the egg shape is tilted, as shown by the diagonal line. The neck is toward the back of the head and slants forward.



2 Nose and eyebrows are located as described at the left. The ear is placed just back of the center of the head. The top is level with the brow, the bottom with the base of the nose. Two lines indicate the mouth – one suggests the mouth opening, the other the bottom of the lower lip.



3 The hair rises above the skull, the hairline runs along the temple and toward the back of the head. The jaw line curves down from the ear. The ears are solid forms.



If you sliced down through the center of the egg head *(left)*, the knife would pass through the center of the nose wedge and the egg would fall apart in two equal halves. If you sliced the egg horizontally *(right)* where the top of the nose wedge meets the egg, you would again find you had sliced the egg in half. This demonstration is intended to remind you that the human head is a solid form. Think of it that way – and sketch it that way – in your basic form drawings. Keep the features simple.

3. Movable parts

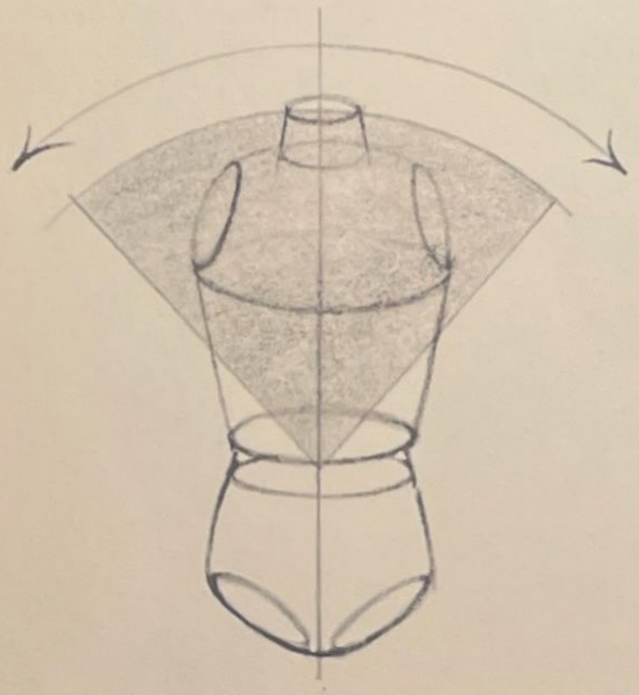
Important points at which motion occurs in the body are indicated by white dots on the figure at the left. The individual parts are connected by three distinctly different types of joints: 1) the ball-and-socket joint, which appears at the shoulders and hips; 2) the hinge joint, found at the knees and elbows; and 3) the flexible column, a term used to describe the spine and the neck. The action of the first two of these joints is illustrated on the opposite page.

Each of these joints varies considerably in the type of motion it allows. The ball-and-socket joint is extremely flexible. The part of the body attached to it can be swung around or back and forth in every direction – just as though it were attached to a ball revolving in a socket. However, the amount of motion depends on the construction of the individual joint. Although not ball-and-socket joints, the wrist and ankle joints permit similar rotary movement.

The hinge joint at the elbow and knee works much like an ordinary door hinge. It allows the forearm to swing forward and the lower leg to bend backward and then to reverse these movements until each limb is back in a straight line again. However, it does not permit the forearm or lower leg to bend sideways. Try these movements yourself and observe the different ways the ball-and-socket joints and the hinge joints work.

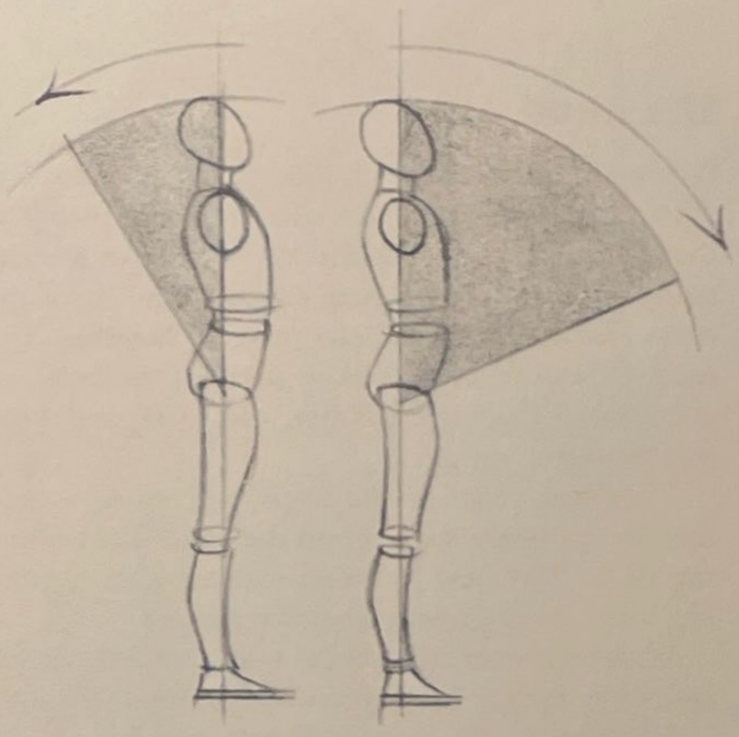
The third kind of joint is the flexible column of the spine. This connects the upper and lower halves of the body. The spine is involved in any motion which requires shifts in weight, such as walking, running, and jumping. Since it is highly flexible, it permits not only a turning motion in all directions but also a twisting motion throughout its entire length. The upper part of the spine is in the neck, which controls all motions of the head.

The diagrams on this page are intended to remind you of the various possibilities which these three different joints provide. However, you can study the possibilities and limitations of motion in the human body best by experimenting to see how the various portions of your own body move. Test out these diagrams for yourself.

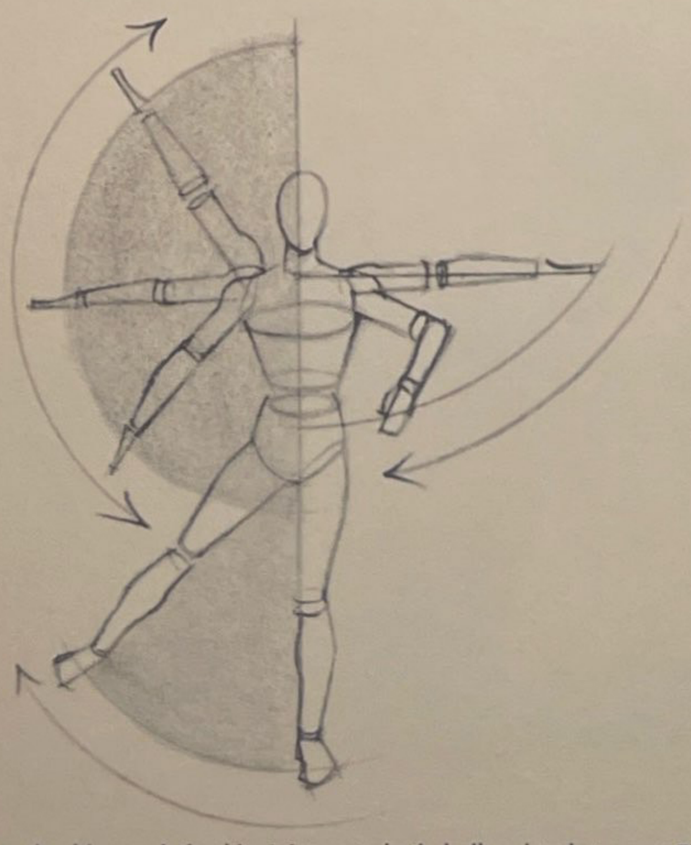


The motion of the upper and lower torso is extremely important in almost every action pose. Although the upper portion of the body has the greater range of motion, its side-to-side movement is limited as shown here.

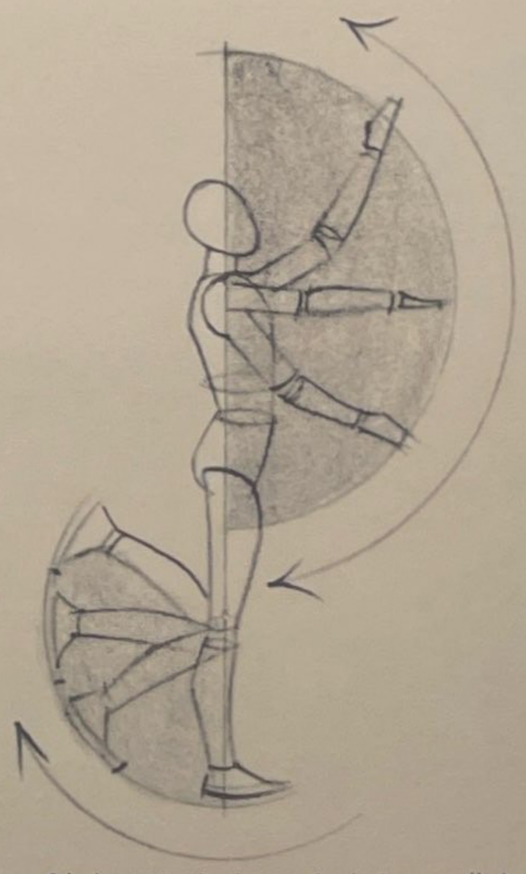
In many action poses the body twists in such a way that the upper and lower torso move in opposite directions. The spine is so constructed that it can bend and twist at the same time, as the illustration demonstrates.



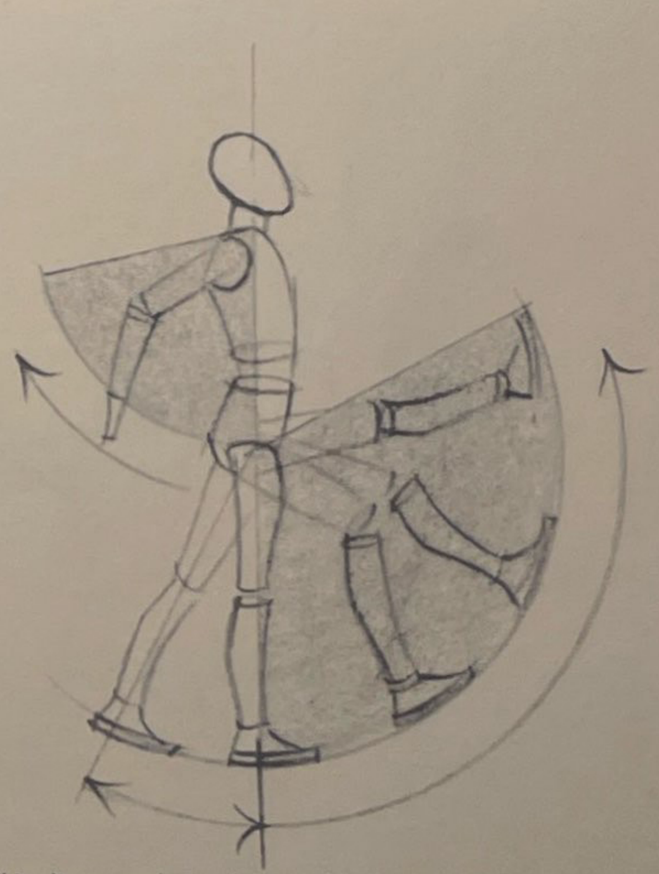
The spine and hip joints allow the upper part of the body to bend forward until it is practically at right angles to the lower. The backward motion is more limited. The spine permits somewhat the same movement as if the upper torso were mounted on a ball-and-socket joint.



The shoulder and the hip joints are both ball-and-socket rotary joints, but because of construction the shoulder joint is much more flexible than the hip joint. Motion of the shoulder joint covers a complete arc, as you can see, but motion of the hip joint is much more limited.



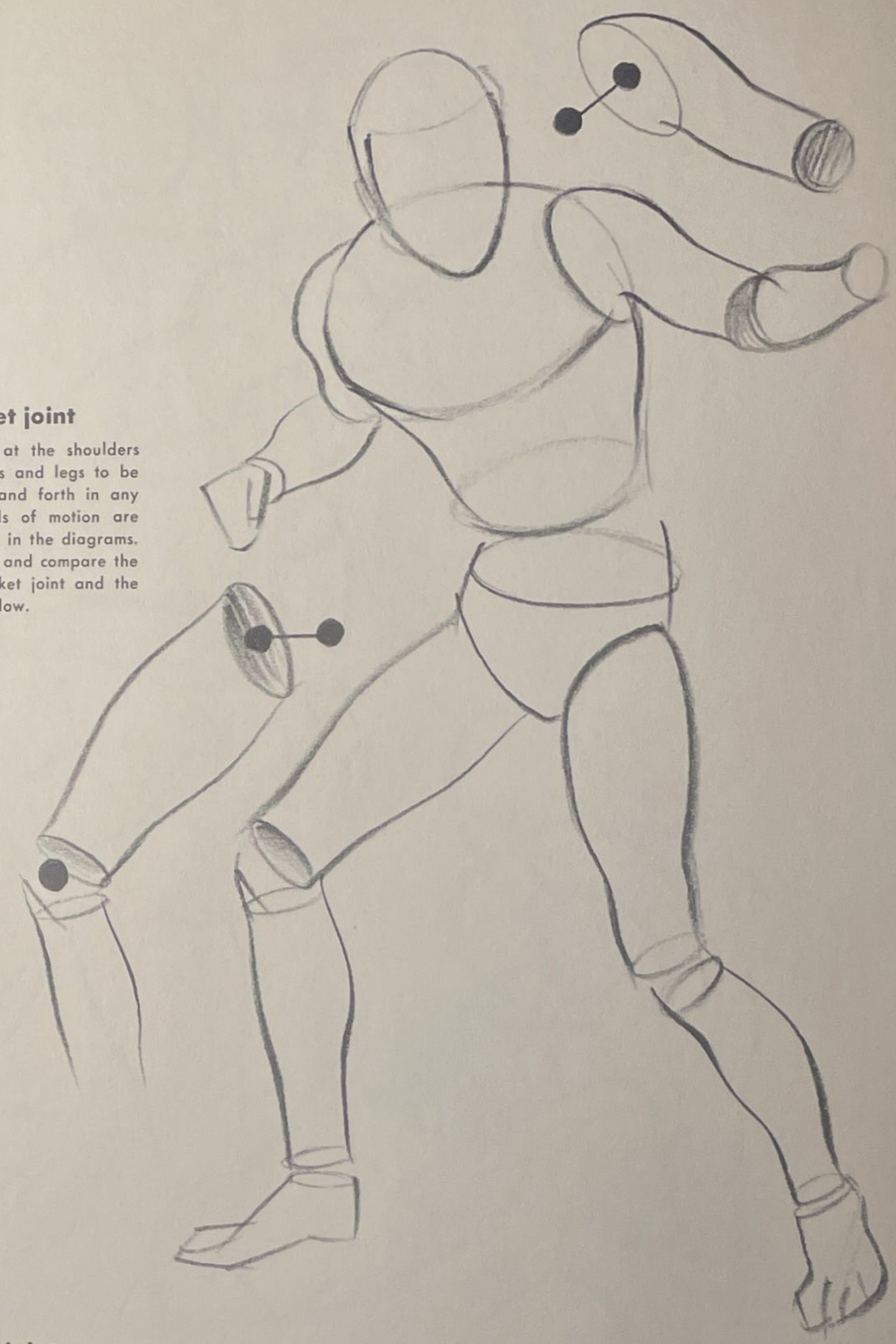
The sense of balance in the human body is so well developed that when one part reaches out from the central axis, another part instinctively tends to extend itself to create a new state of equilibrium. If the arm reaches up, the lower leg will probably be lifted back to balance it.

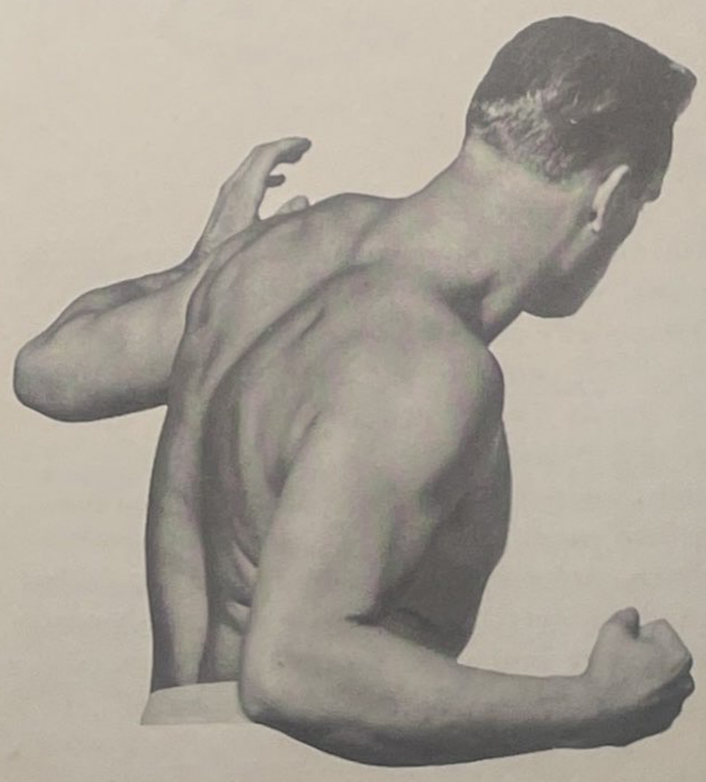


This diagram shows the possible backward movement of the arm and the forward movement of the leg. These two motions are naturally associated, as are the two motions shown in the previous example. Always take this matter of reciprocal balance into consideration.

The ball-and-socket joint

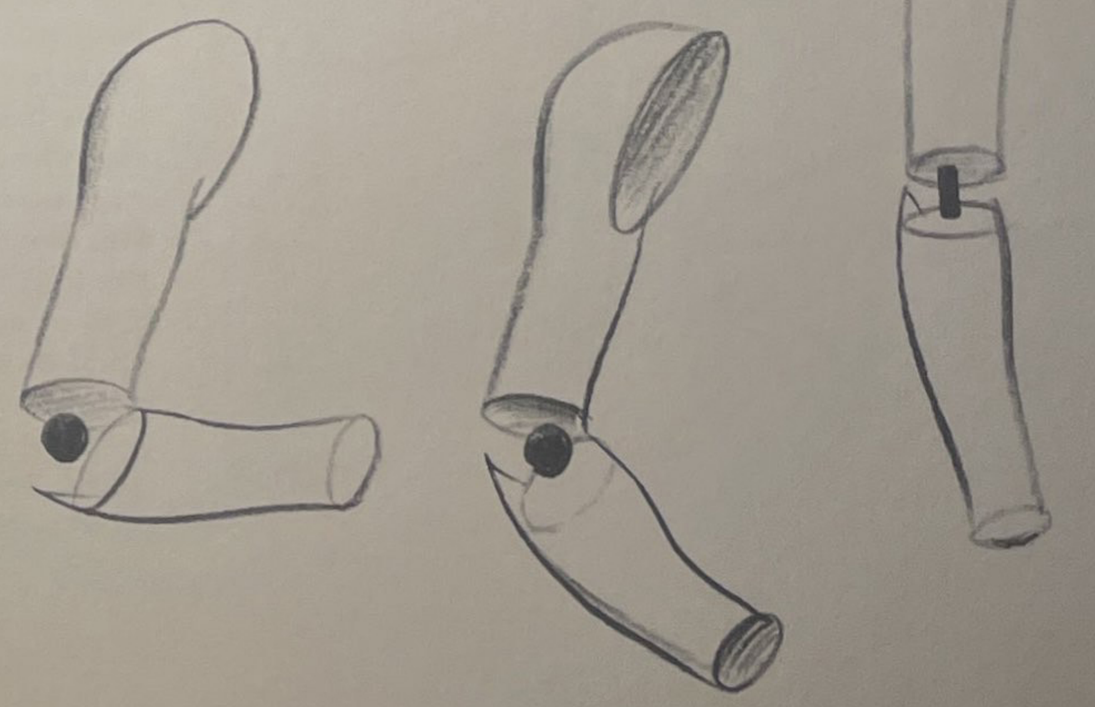
The ball-and-socket joint at the shoulders and hips permits the arms and legs to be revolved or swung back and forth in any direction. These two kinds of motion are indicated by the two balls in the diagrams. Swing your arms and legs and compare the action of the ball-and-socket joint and the hinge joint, described below.

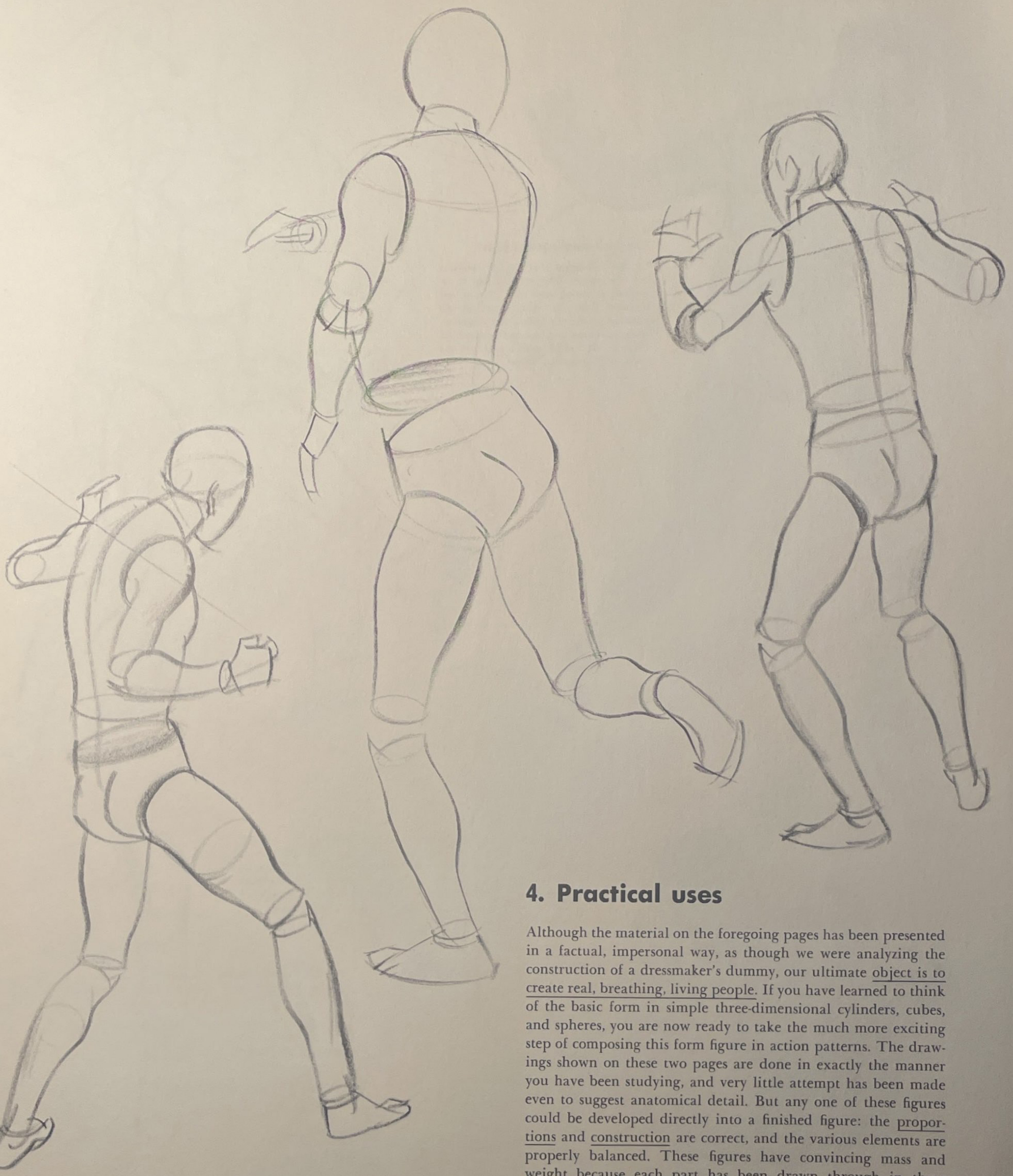




The hinge joint

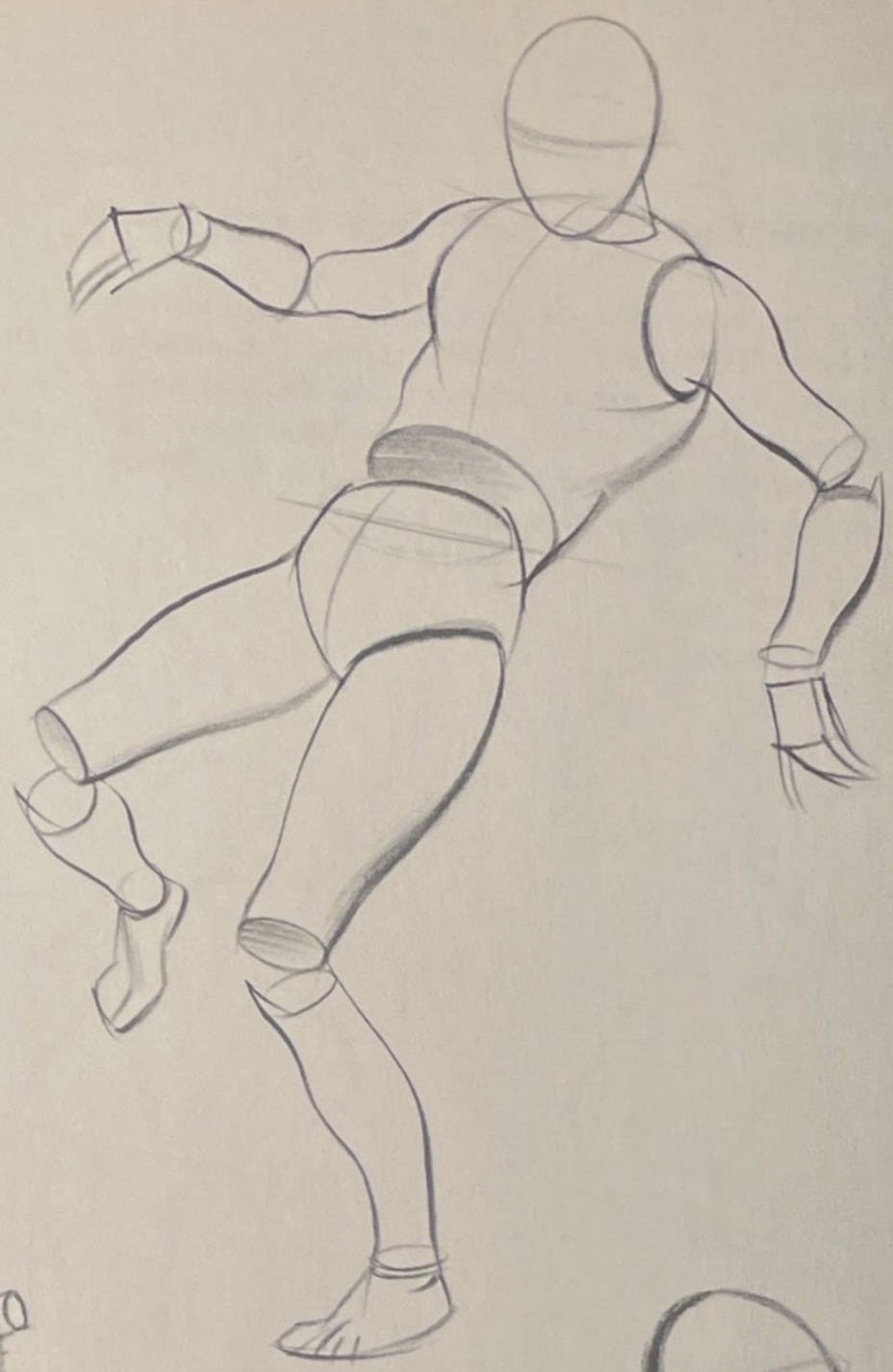
The hinge joint, shown by a black disk, allows limited motion back and forth. The hinge joint at the elbow permits the lower arm form to bend forward toward the upper arm form; backward motion is stopped when the two forms are in a straight line. The hinge joint of the knee enables the lower leg form to bend backward toward the upper leg form; knee-cap stops forward motion when both forms are in a straight line.

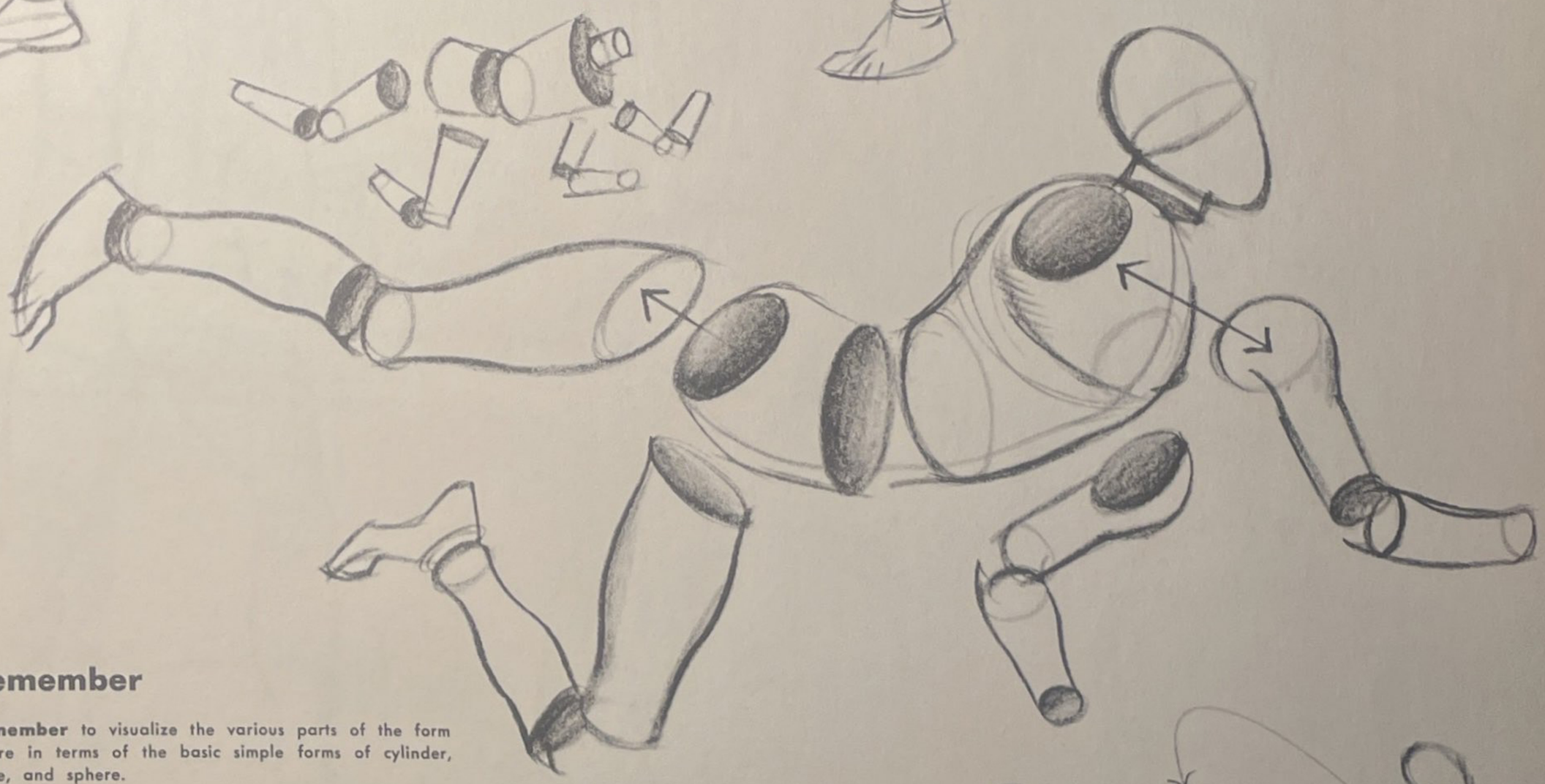




4. Practical uses

Although the material on the foregoing pages has been presented in a factual, impersonal way, as though we were analyzing the construction of a dressmaker's dummy, our ultimate object is to create real, breathing, living people. If you have learned to think of the basic form in simple three-dimensional cylinders, cubes, and spheres, you are now ready to take the much more exciting step of composing this form figure in action patterns. The drawings shown on these two pages are done in exactly the manner you have been studying, and very little attempt has been made even to suggest anatomical detail. But any one of these figures could be developed directly into a finished figure: the proportions and construction are correct, and the various elements are properly balanced. These figures have convincing mass and weight because each part has been drawn through in three dimensions.





Remember

Remember to visualize the various parts of the form figure in terms of the basic simple forms of cylinder, cube, and sphere.

Remember to use ordinary glasses to help you see how the ellipses look in the simple cylinders of the upper and lower torso, the upper and lower arms, and the upper and lower legs.

Remember to think of the head as an egg-shaped sphere.

Remember the law of balance and equilibrium.

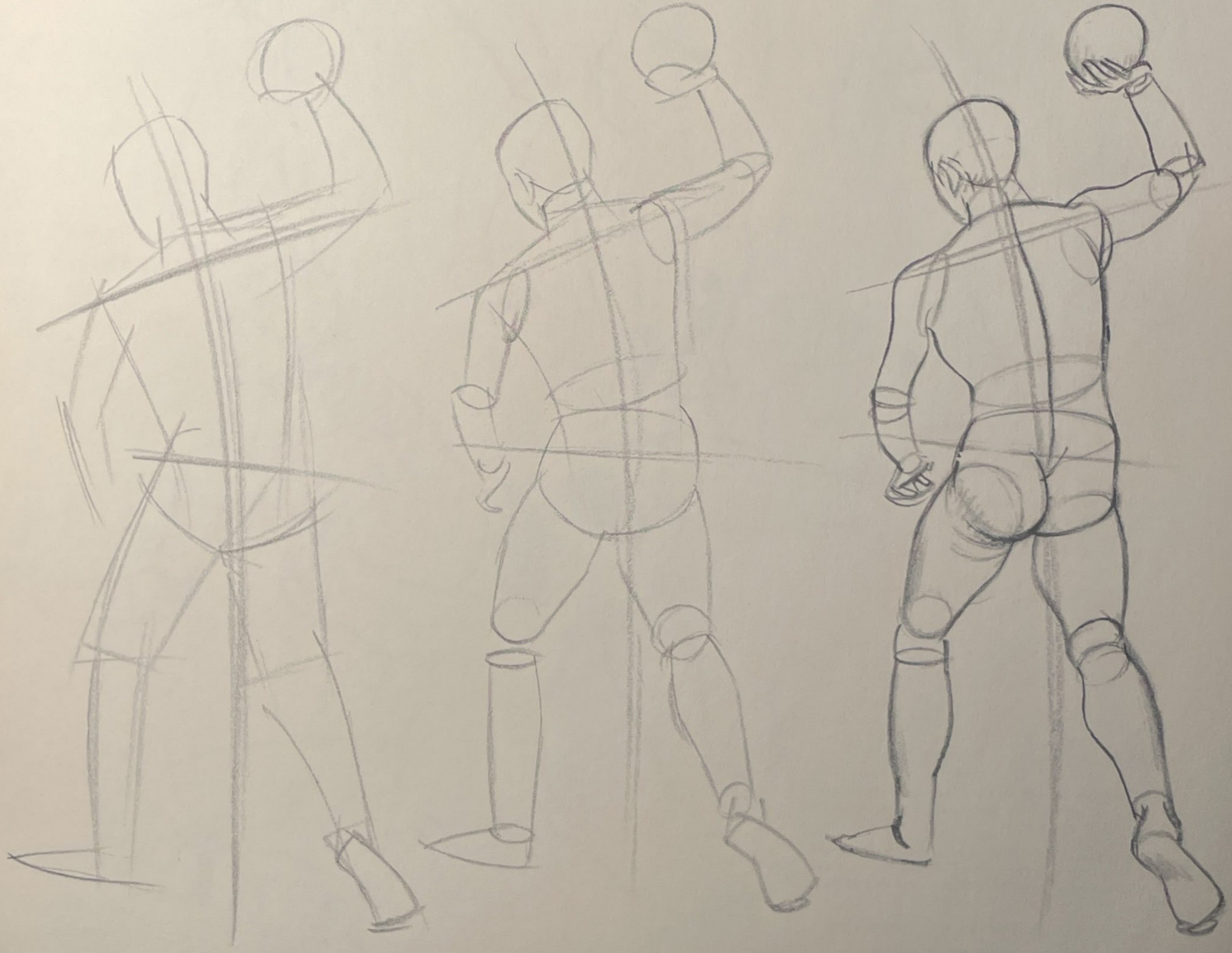
Remember to draw all forms through to the other side.

If you follow these principles, you will have a practical approach to developing convincing drawings of the human figure in action.

How to draw the basic form figure and head

The drawings on these two pages show you how to get started drawing the basic figure and head. Work freely at first, without attention to details or the exact placement of individual lines. Your first lines are simply "starters" – you use them merely to suggest the size of the figure and its pose. Once you have these down, you can make the form more accurate.

Work in a relaxed, informal way when you sketch the figure. Draw in pencil and don't hesitate to erase and change. It's a mistake to try to "freeze" or tighten up your sketch too quickly. Try to feel the action. Above all, keep the solidity of the forms in mind and draw them through. This is the best way we know to create the illusion of three-dimensional figures.

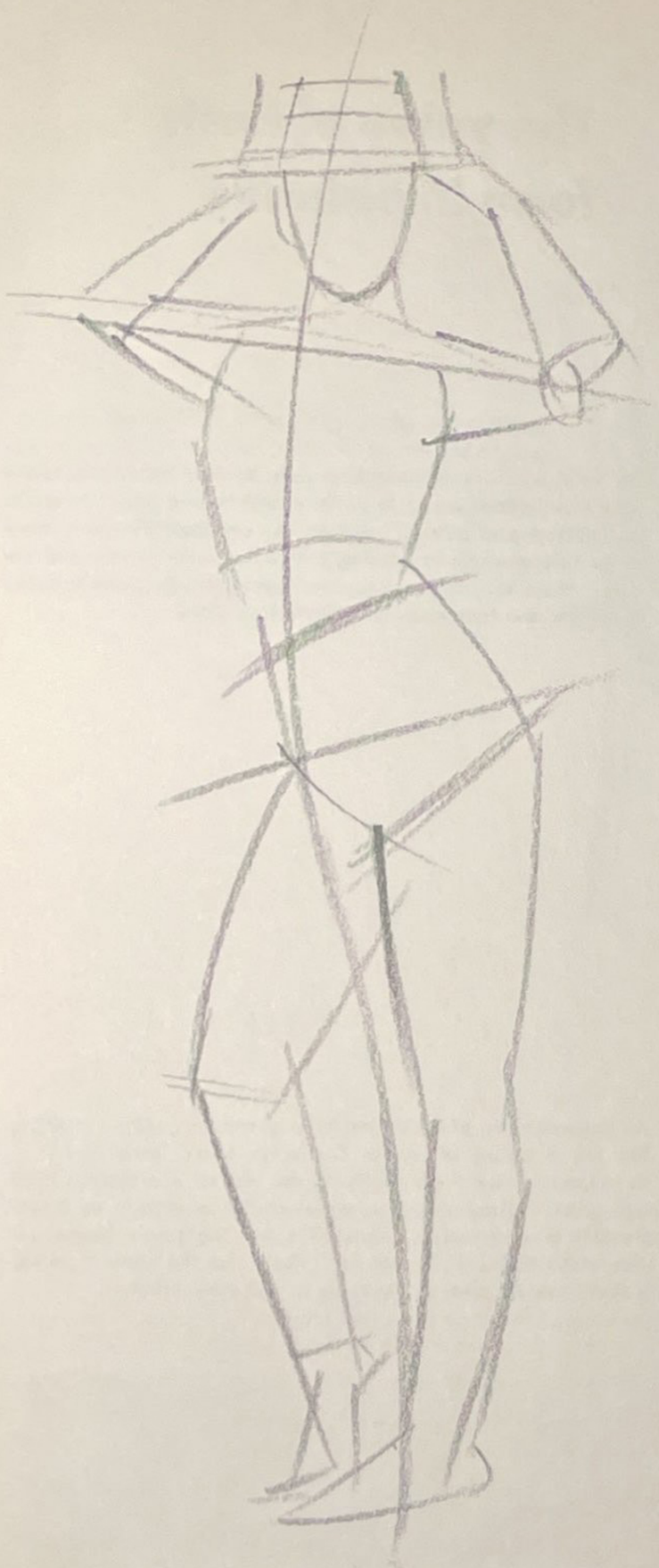


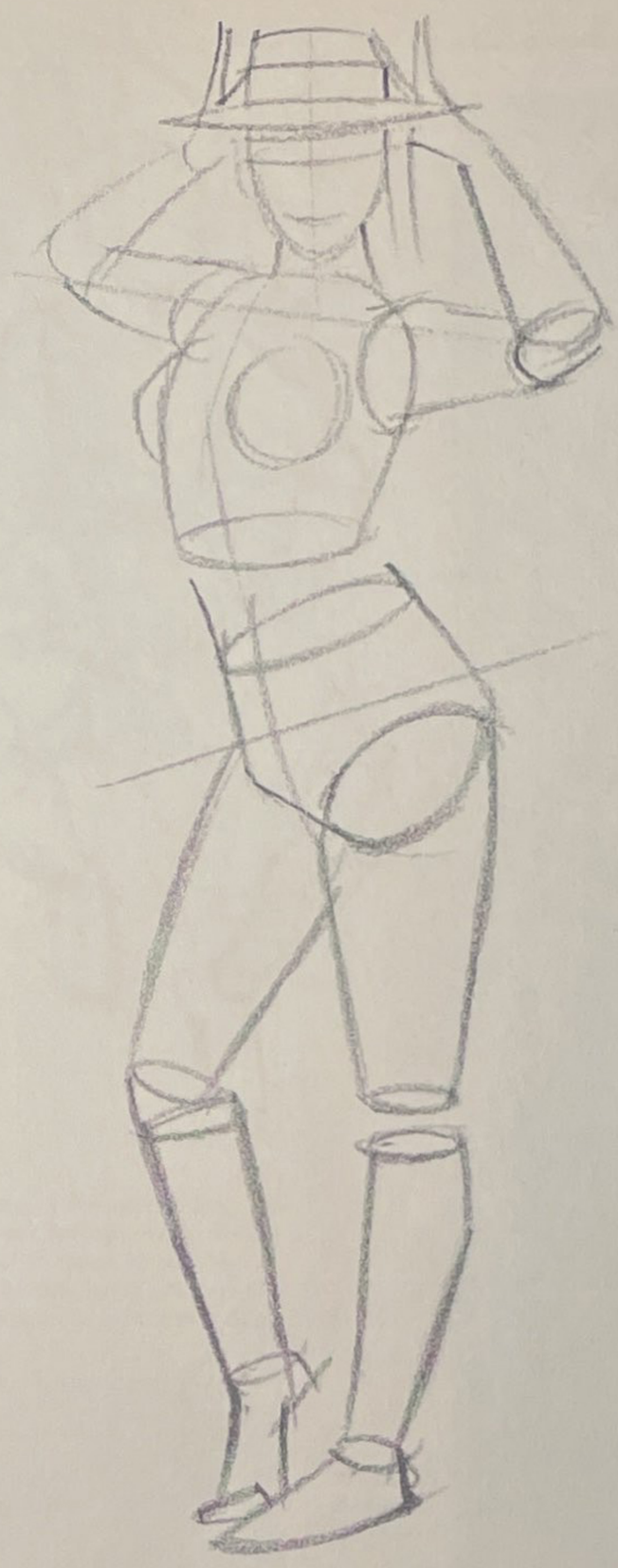
How to draw the male basic figure

1 The first sketch lines indicate the general position of the body and the "flow of action." There is no attempt at solid form or detail yet. But we have suggested the size of the figure and its general pose.

2 Over the first lines we now begin to sketch in the broad details of the pose and the basic figure forms. We draw each form solidly, so that it really seems to exist in depth. Some lines are erased and redrawn.

3 Now the figure forms have been sharpened with more accurate lines and the figure is close to a real human form. After a little erasing, it will be ready to be carried on toward a finished drawing.



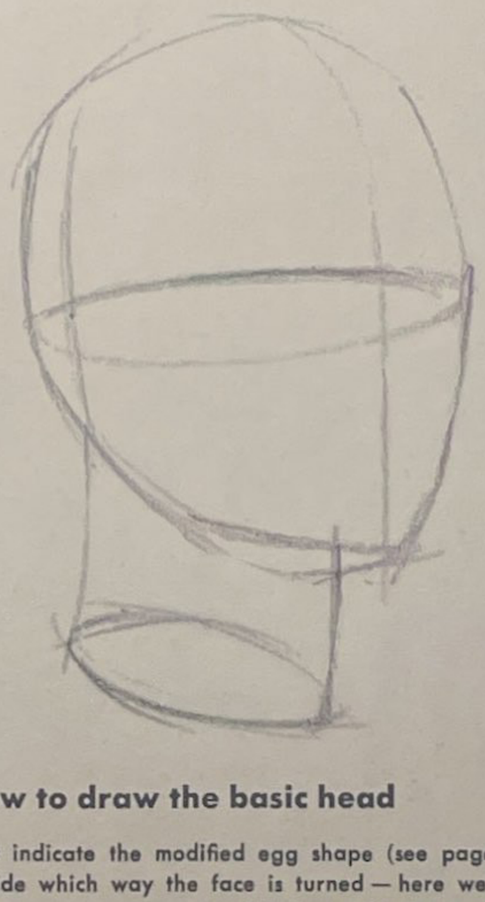


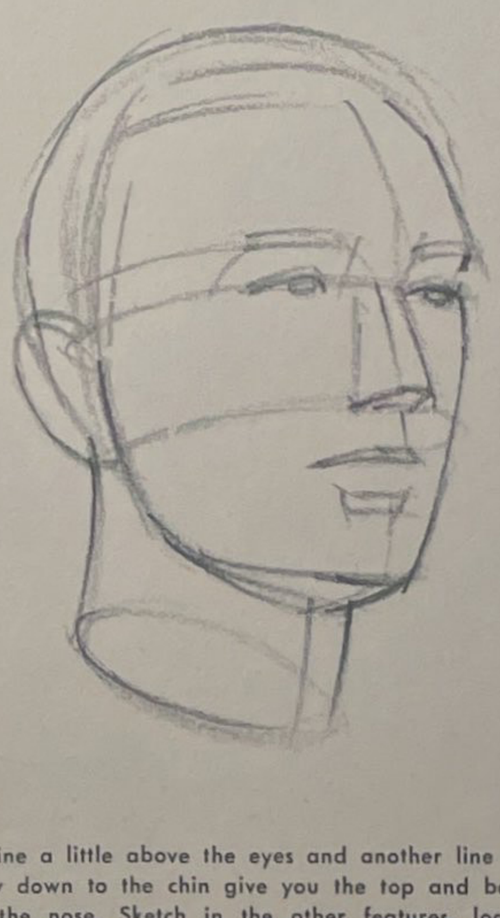
How to draw the female basic figure

1 Sketch in loose, free-flowing lines to indicate the size and position of the figure. These lines don't have to be exact — most of them will be covered up or erased as the drawing develops toward the finished stage.

2 Drawing freely over your first lines, start to suggest the basic figure forms. Decide such things as proportions, which way the hips tilt, which way the head is turned.

3 As you work, adjust the figure forms and define them more clearly. Be sure to "draw them through" as solid forms. When you are satisfied that your basic figure is correct, you can draw in clothing and other details.





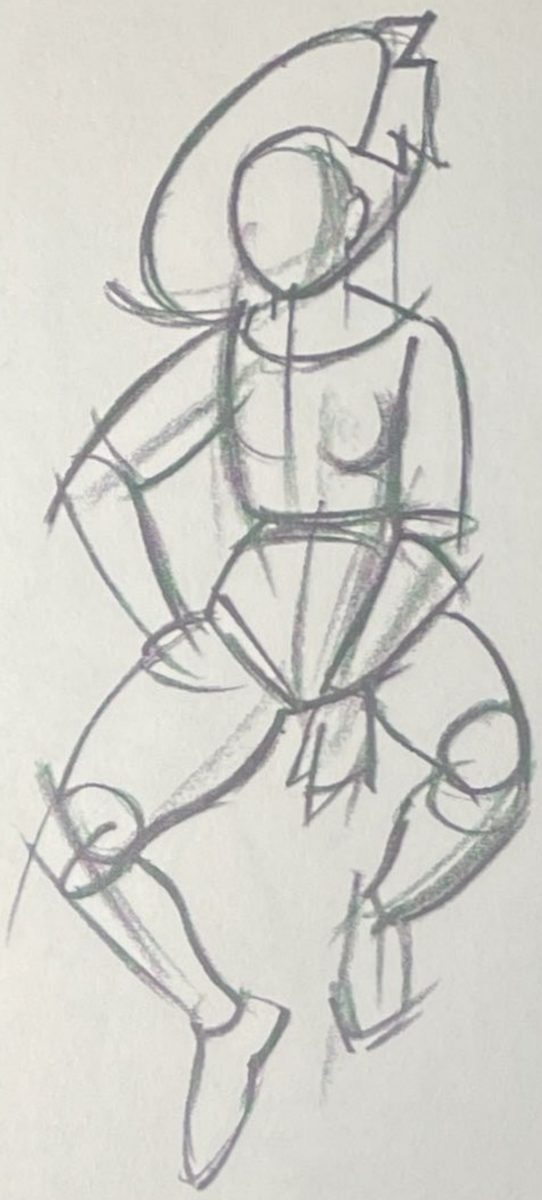
How to draw the basic head

1 First indicate the modified egg shape (see page 15). Decide which way the face is turned — here we have a three-quarter view — and indicate this by a vertical center line which represents the center of the face, and a horizontal line to locate eyes. Sketch in neck.

2 A line a little above the eyes and another line halfway down to the chin give you the top and bottom of the nose. Sketch in the other features, locating the ear by the nose lines. Remember that these guide lines go around the solid form of the head.

3 Indicate the hairline and the side plane of the head. Then refine the forms a little and erase your guide lines. Practice drawing heads this way — thinking of the large, simple solid forms. Don't draw such small details as eyelashes — you will learn about them later.

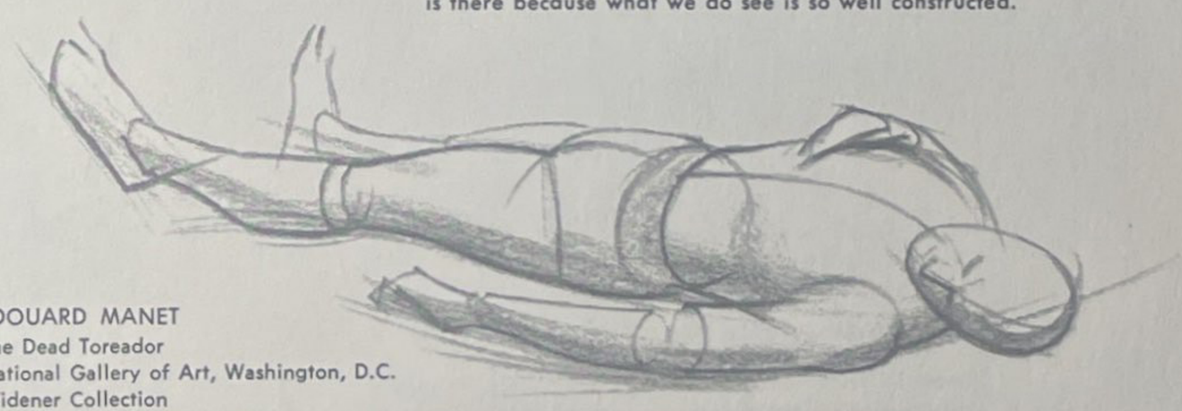
ARNOLD BLANCH
Circus Girl
Courtesy, The Art Students League
New York Gallery



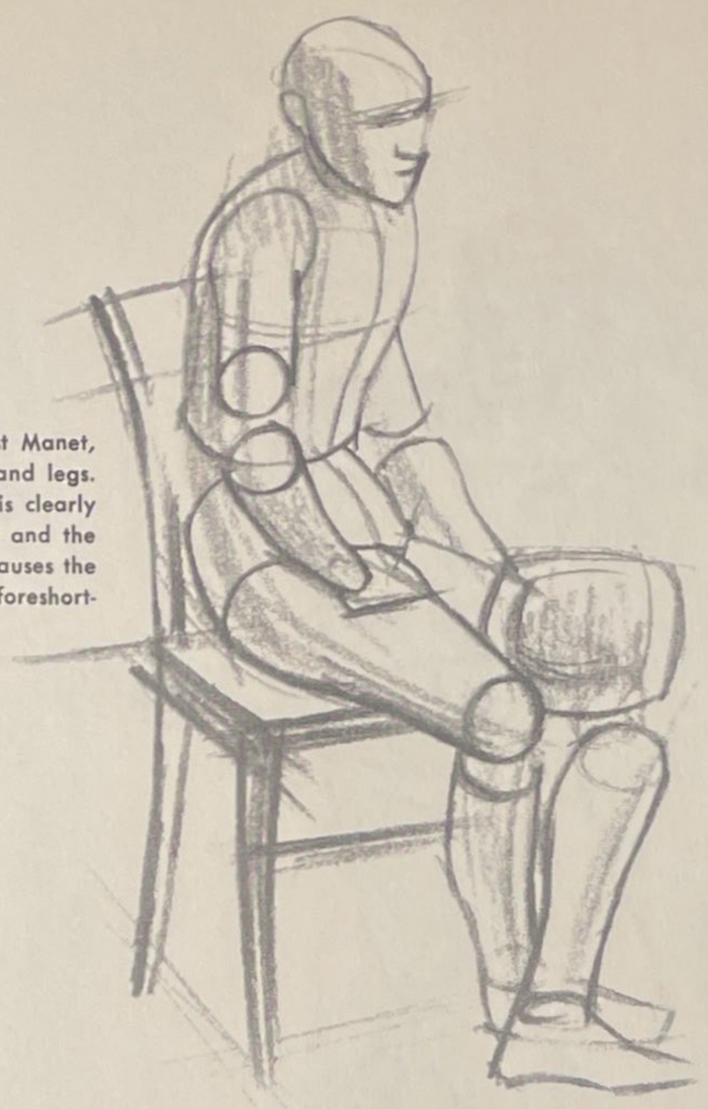
The value of basic form in painting

The solid figure in this painting owes much of its success to the artist's understanding of basic form and how to use it to create the impression of bulk and weight. The convincing forward thrust of the left knee, the interesting variations in the positions of the arms — these are the result of carefully constructing and drawing the figure as a form existing in three dimensions.

An understanding of basic form helps greatly in giving a painting like this a feeling of reality. The entire figure, here seen in a three-quarter view, rests solidly on the ground and extends back into space. The right hand curves over what appears to be a substantial, three-dimensional chest. The left leg partly blocks our view of the right one, but we don't doubt that the whole right leg is there because what we do see is so well constructed.



EDOUARD MANET
The Dead Toreador
National Gallery of Art, Washington, D.C.
Widener Collection

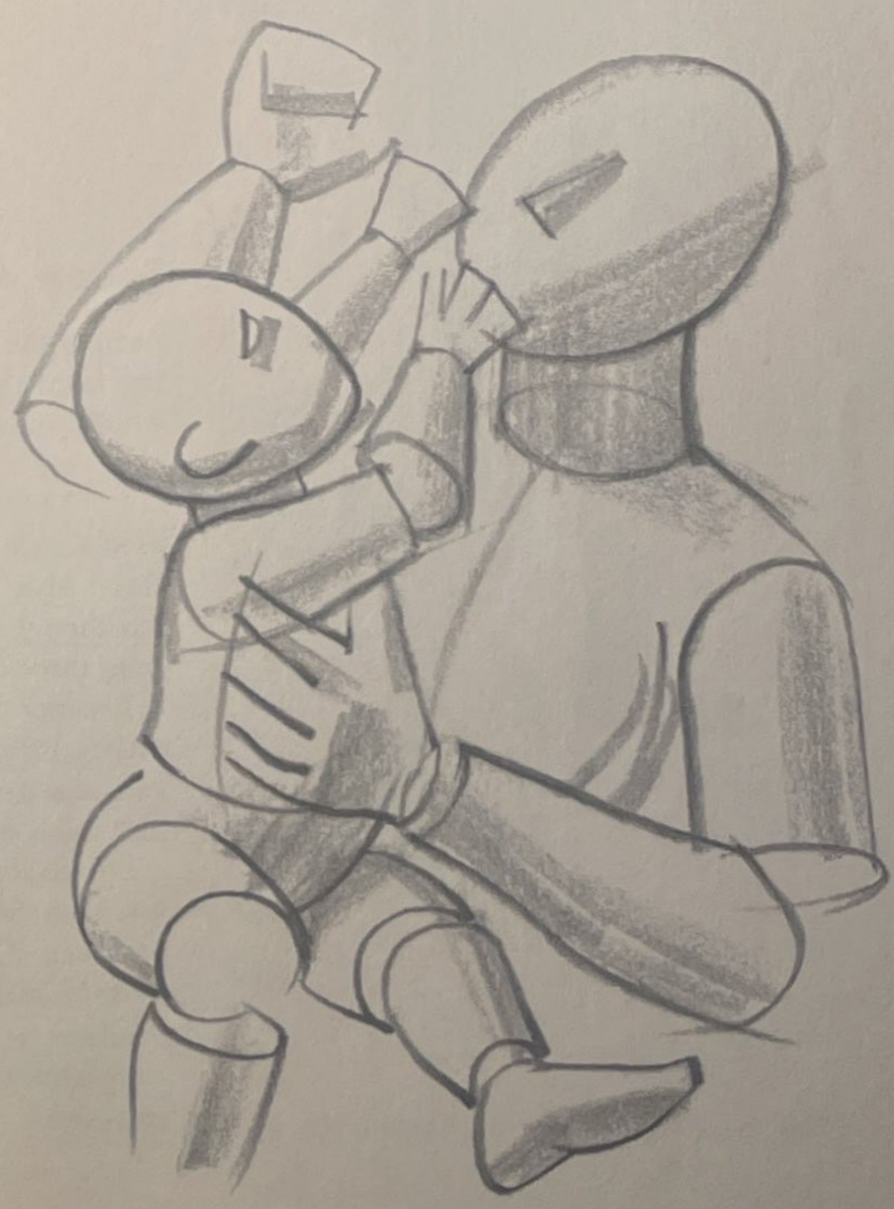


Beneath the clothing of the subject, the artist Manet, we sense the solid forms of the torso, arms, and legs. The influence of these forms on the clothing is clearly shown in the folds at the shoulder, the knee, and the elbow. The slight forward lean of the figure causes the clothing to fall free of the chest. Notice the foreshortening of the right arm and the crossed legs.

EDGAR DEGAS
Study for a Portrait of Edouard Manet
The Metropolitan Museum of Art
Rogers Fund, 1918

The massiveness and solidity of the figures are one of the most striking features of this interesting treatment of a classic theme. The painting is actually not much different from the diagram in terms of its basic form. Note the arms, legs, and torso of the child and mother. The solid, bulky cylinders and spheres that make up the two figures suggest how effectively Picasso uses the principle of basic form.

PABLO PICASSO
Mother and Child
Courtesy, Alex Hillman Corporation



Seven artists draw the same figure

Each of the drawings on these pages was made by a different artist working from the figure shown at the left. Here are two important points which you should gain from your study of these drawings and apply to your own work:

1. Each artist has drawn the figure in his own personal way. He has used a style that is easy and natural for him.
2. Most important of all – each drawing clearly shows that the artist has thought of the figure and drawn it as though it were made up of solid three-dimensional forms.

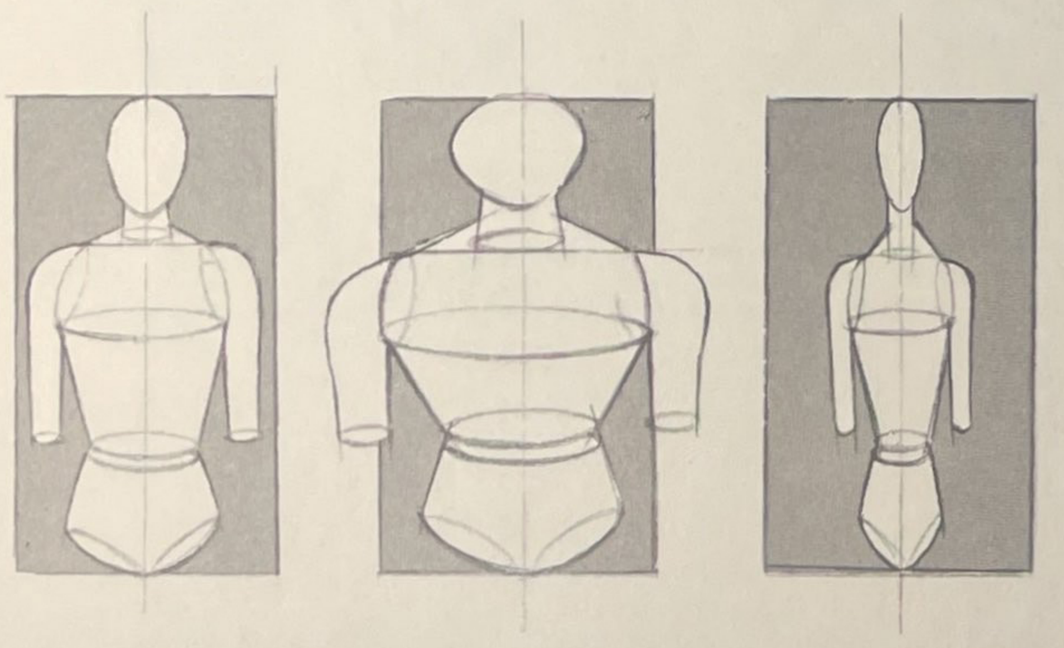
Because the feeling for form has now become a habit with these artists, they no longer find it necessary to draw the arms, legs, torso, etc., as separate cylinders. Nevertheless, their pictures clearly show they still think of them in these terms as they draw.

To make solid, convincing figure drawings, you must concentrate on learning the basic forms of the figure which we have carefully described on pages 7 through 17. At this stage of your training you will benefit most by making drawings which are generally similar to those on pages 18 through 21. As you gain more and more experience drawing these simple solid forms, you will naturally and unconsciously develop your own style.

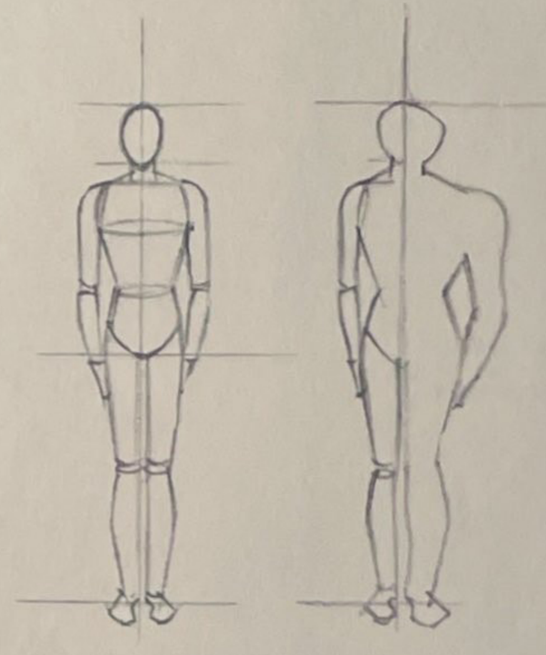
Draw from life every chance you get

5. Do's and don'ts

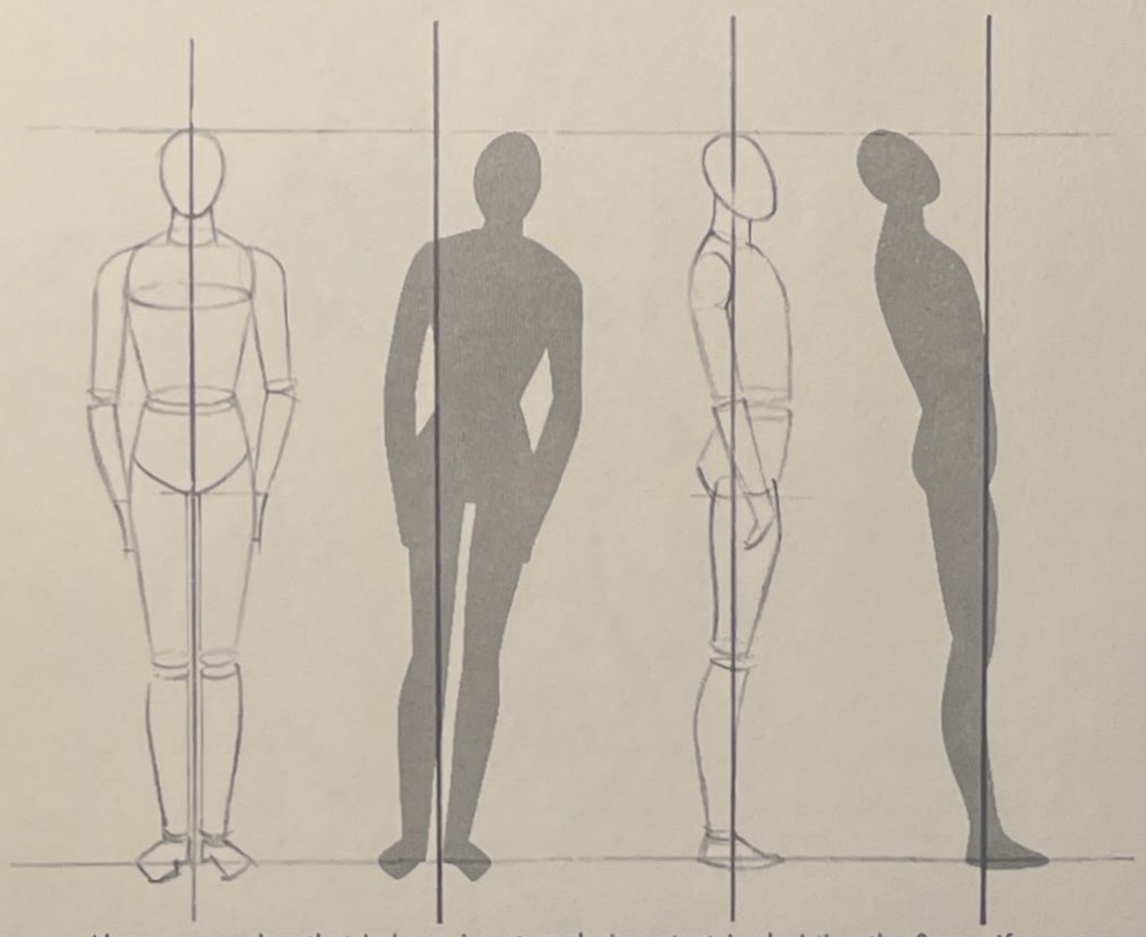
No matter how careful you are in drawing the form figure, you will sometimes find that you have made mistakes in construction or proportions without realizing it. The drawings in this section show you the most common errors. Keep these pitfalls in mind while making your drawings, and check your finished work against these pages; you may discover mistakes you had overlooked.



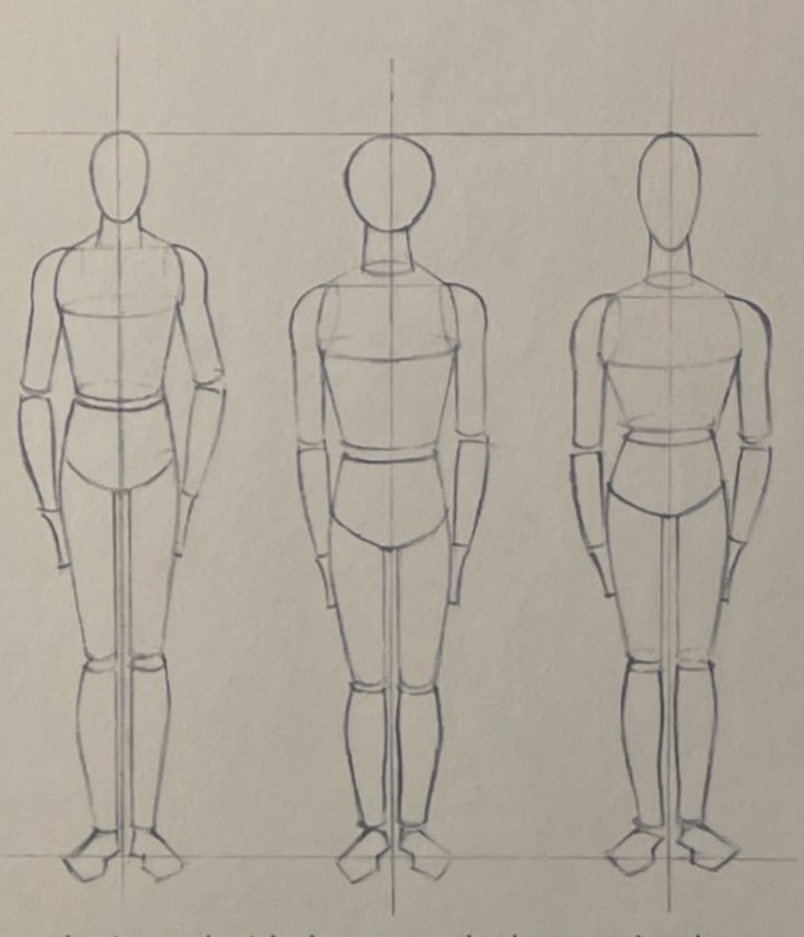
Don't get in the habit of making your figures too broad or too narrow. Remember that the head form you are using as a measuring unit must be correct in its proportions of height and width. If you use too broad or too narrow a head, as in the two drawings at the right, above, the resulting figure will probably be too broad or too narrow also. Remember particularly that the three-head measurement for the upper body includes the shoulders.



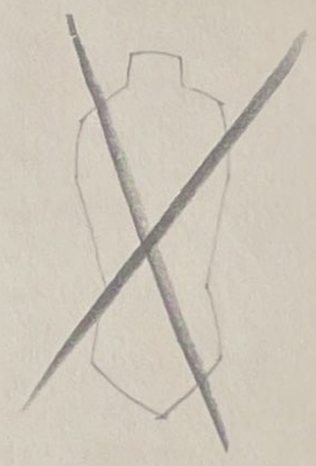
The two sides of your figure should be alike in width as well as in height. Make sure that you avoid the lopsided effect seen above. It is easy to check this in straight front or rear views; it is more difficult if the figure is drawn in a three-quarter view where foreshortening may be involved. Be careful to avoid this kind of distortion.



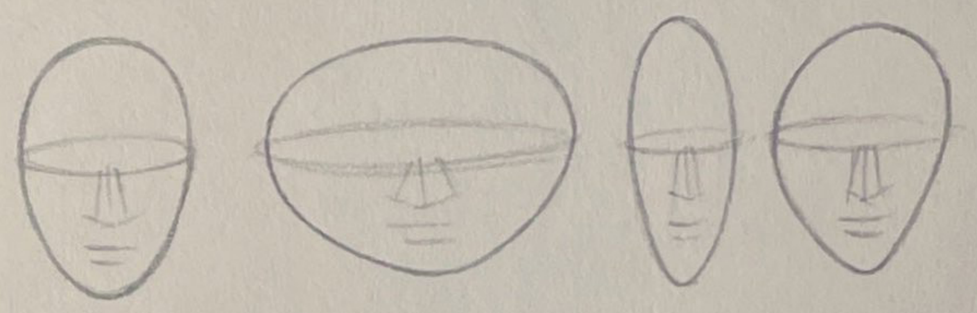
Always remember that balance is extremely important in depicting the figure. If you are drawing a vertical figure, like those above, establish a vertical axis and balance the figure on that axis. If the figure is drawn off balance, it must be supported against some other object, like a wall or a table, or it will topple over.



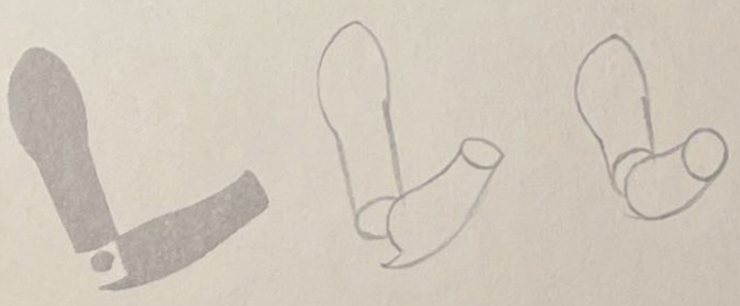
The two drawings at the right demonstrate what happens when the proportions of the individual parts of the body are incorrect. Notice the wrong head shapes, the long necks, the proportions of torso as compared with arms and legs. It is quite true that people in real life do not always follow the ideal proportions of the eight-head figure at the left; but remember that you are drawing ideal form figures now, and not attempting to make realistic copies of real-life models.



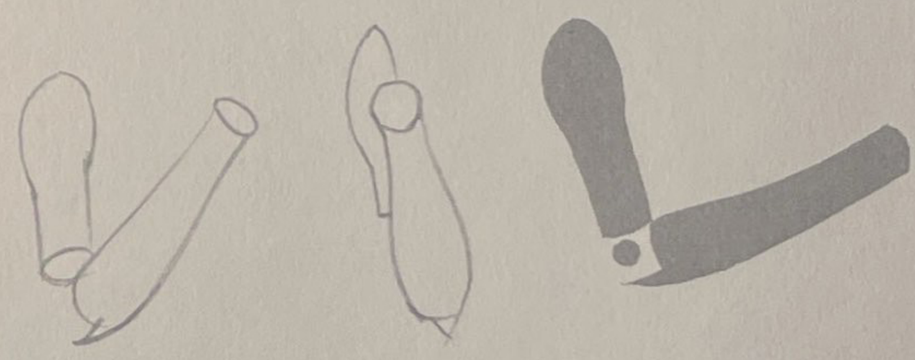
Remember to draw the figure through. Think of the individual forms as though they were transparent forms drawn within transparent glass cylinders. Then you will be able to avoid making "outline" drawings without three-dimensional solidity.



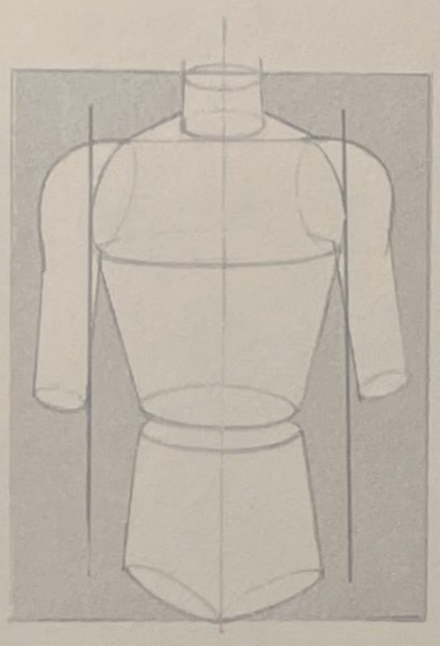
At the left you see the correct shape of the head. The width is right in relation to the height. The other three shapes are obviously incorrect. You should be careful to avoid distortions of this kind.

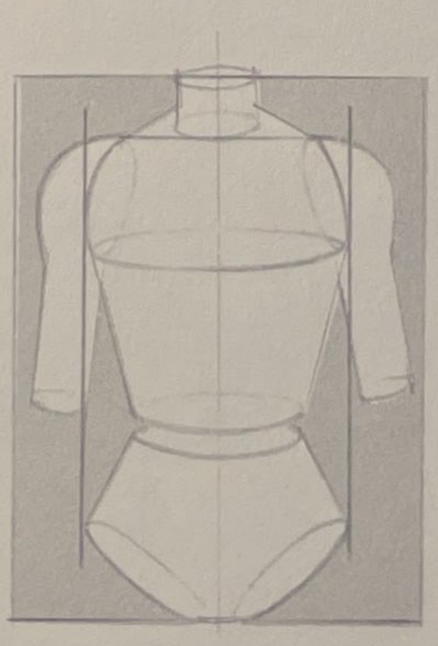


The three drawings above show you the right relationship between the upper and lower portions of the arm.

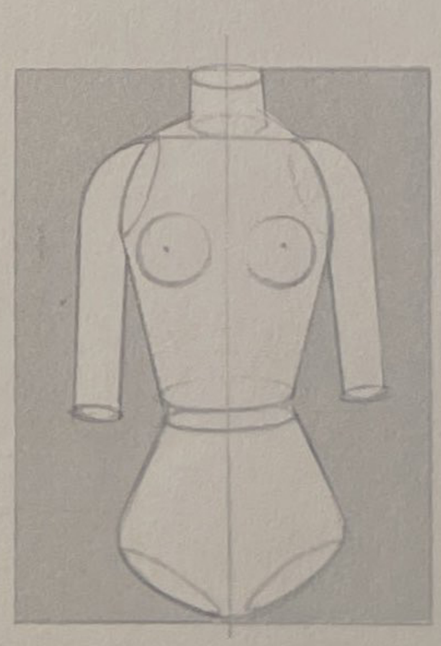


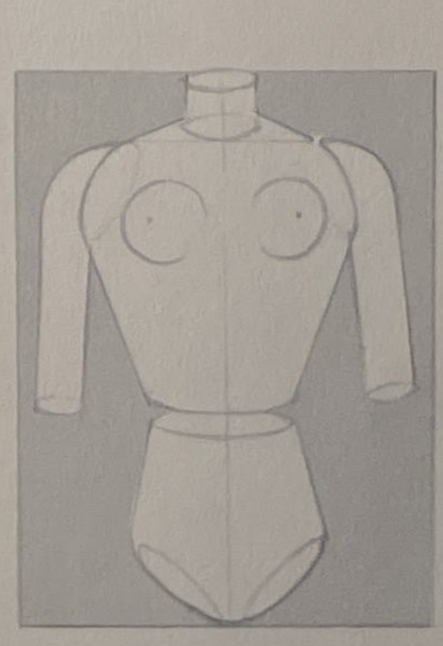
In these three drawings the lower part of the arm is much too long as compared with the upper part. This mistake is particularly easy to make when the arm is foreshortened; be careful to avoid this.



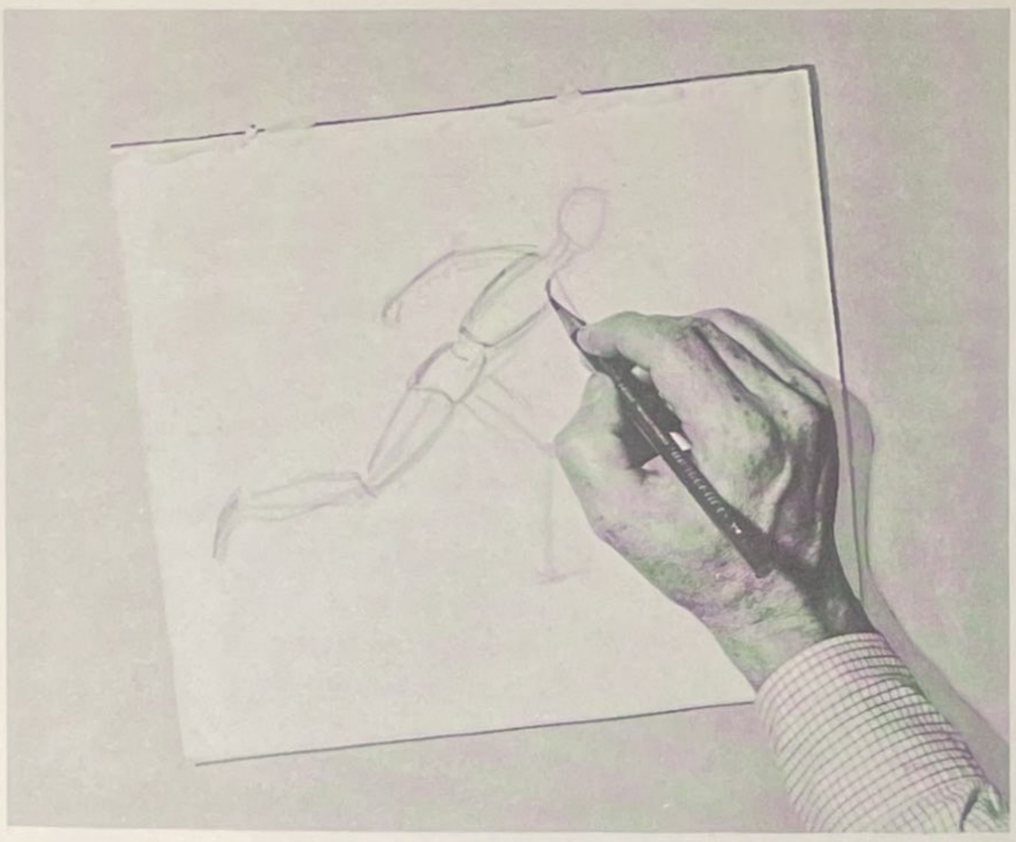


The drawing at the left shows the ideal proportions of the male torso. Notice the width of the lower torso, and the angle of the beveled plane where the legs fit on the body. In the drawing at the right the lower torso is more characteristic of the female, with wide hips and a sharper angle where the legs are attached. When drawing the male torso don't draw a male upper torso with a female lower torso.





The drawing at the left is correct for the female torso. The shoulders and hips are the correct width, the angle of the planes where the legs are attached is right, and the breasts are correctly placed. The drawing at the right shows a torso which would be correct for the male figure, with wide shoulders and narrow hips. Female breasts are indicated, however, and they have been placed too high.



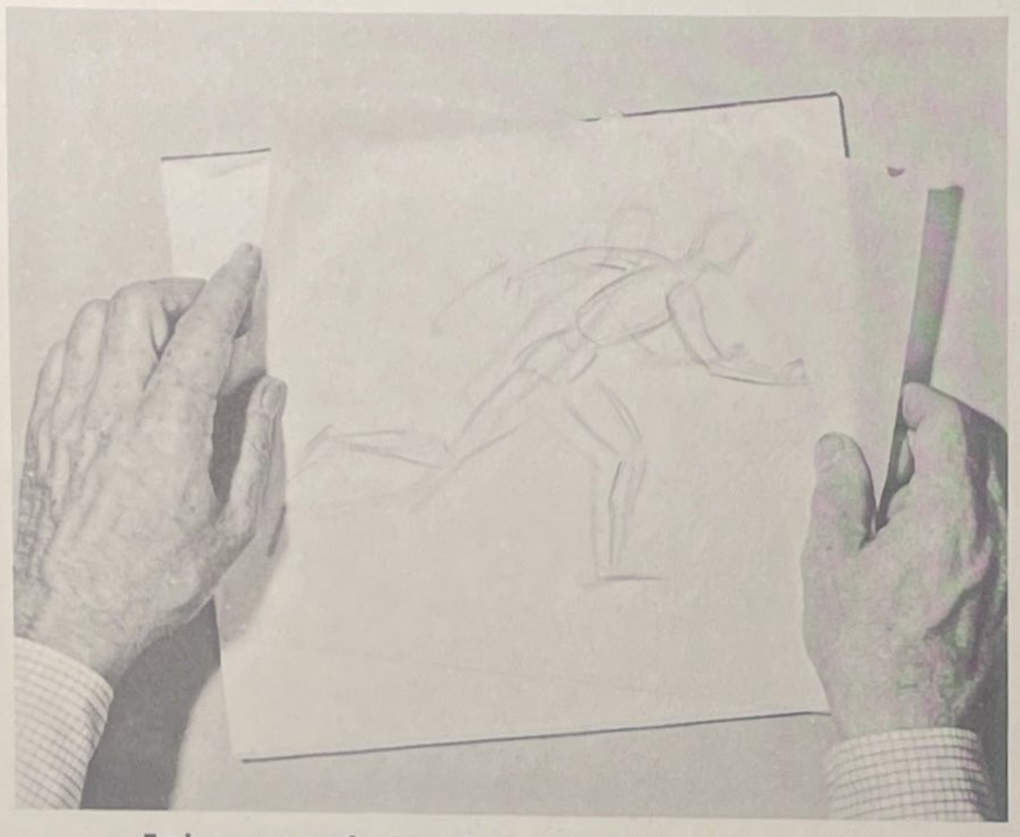
Preliminary sketch: It's helpful to work out your sketches on tracing paper. Here, the basic figure forms begin to take shape as the artist draws directly over his first sketchy "action" lines. Draw lightly at first so you can easily remove unwanted lines with kneaded eraser.

Think with tracing paper

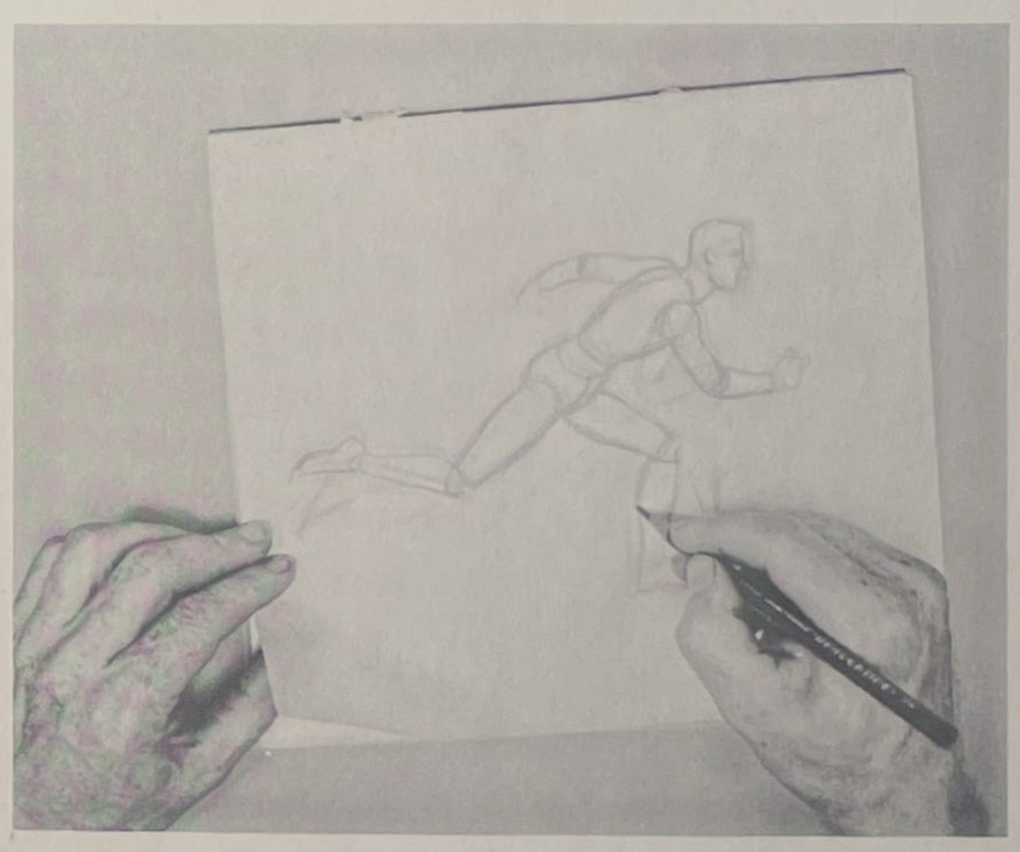
Tracing paper is often called one of the artist's most valuable tools. It is an ideal material for making practice drawings of the human figure. It's also excellent for experimenting with picture ideas – for planning and perfecting your drawings, whether of the human figure or any other subject. It's inexpensive and pencil lines will erase easily with a kneaded rubber eraser.

Occasionally a tracing-paper sketch will become messy because of many erasures. All you have to do is slip the sketch under a clean sheet of tracing paper and trace off the lines you want. If you are working on a picture with several figures, you can adjust their positions in relation to each other by drawing them on separate sheets of tracing paper and shifting these around till the figures look right. Then you can trace them on a single fresh sheet.

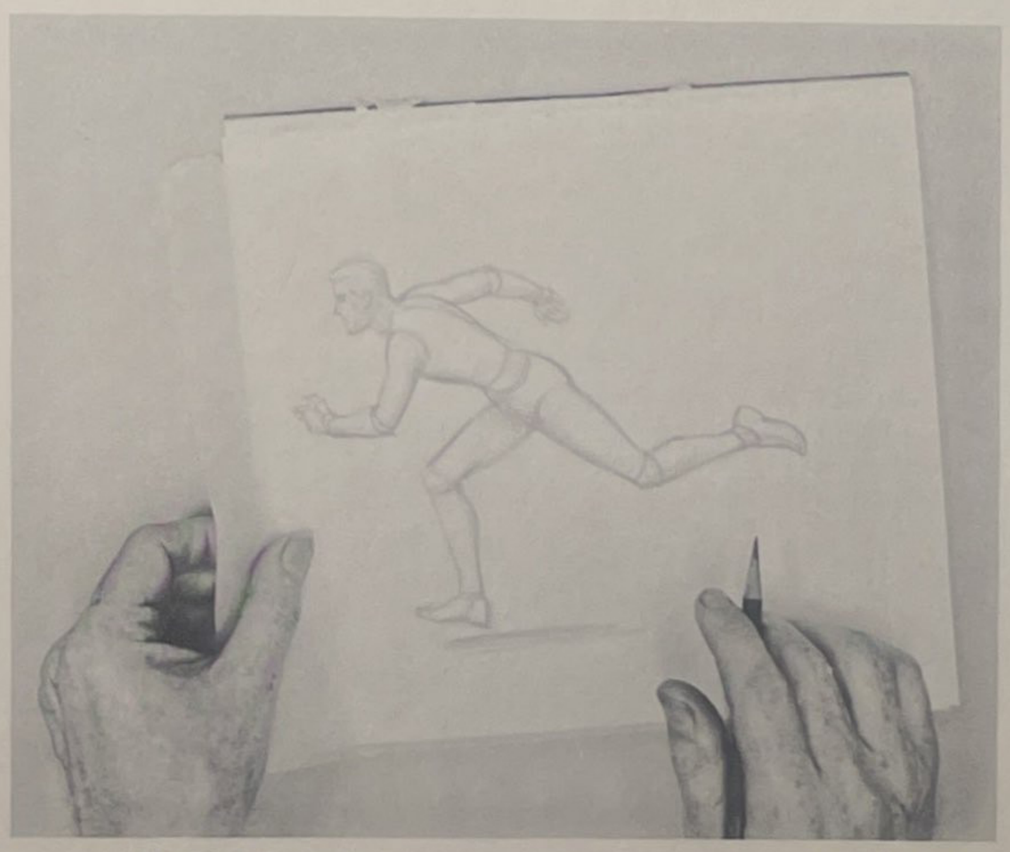
On this page we show you some ways to use tracing paper that we hope will make this material one of your most valuable tools, too.



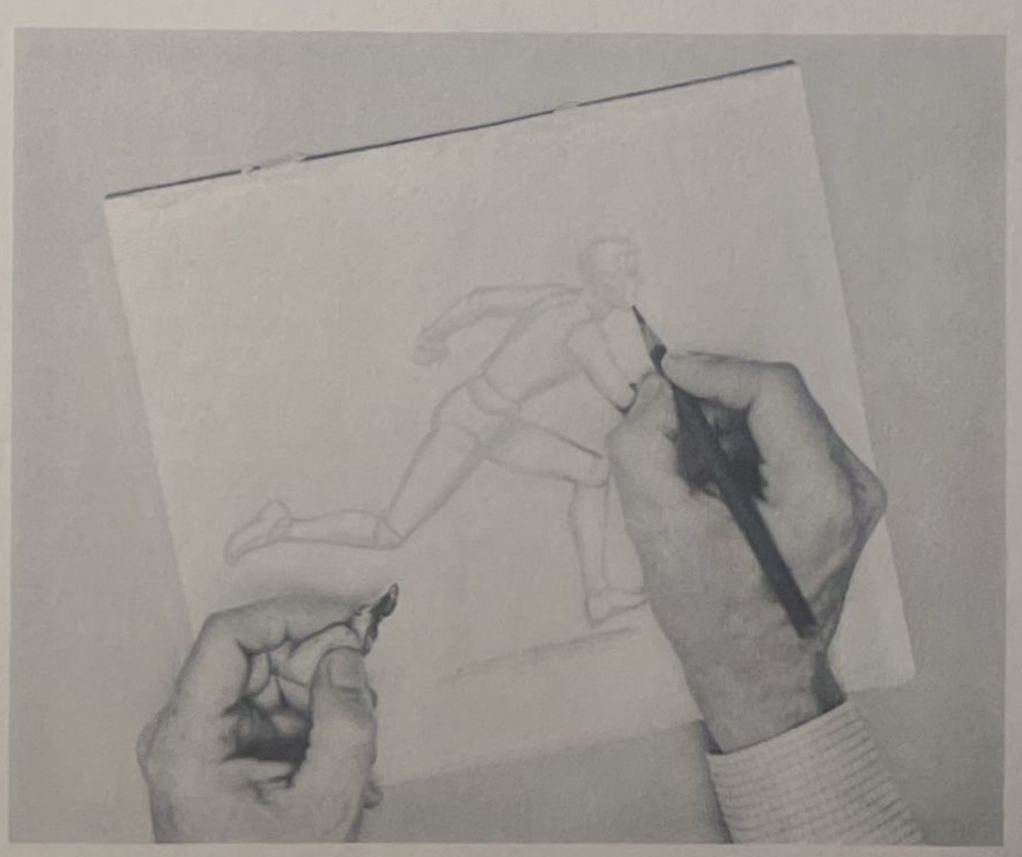
Trying new angle: Tear off the tracing sheet and turn your sketch this way and that to see if a change in angle improves the action. In this case, leaning the figure forward creates a more convincing feeling of motion. All you have to do is trace the figure in this new pose.



New sheet: If, after a number of erasures, your drawing becomes too smudged or cluttered, slip it under a clean sheet of tracing paper. Now draw a new figure, using your previous drawing as a guide, and selecting the portions you wish to salvage.

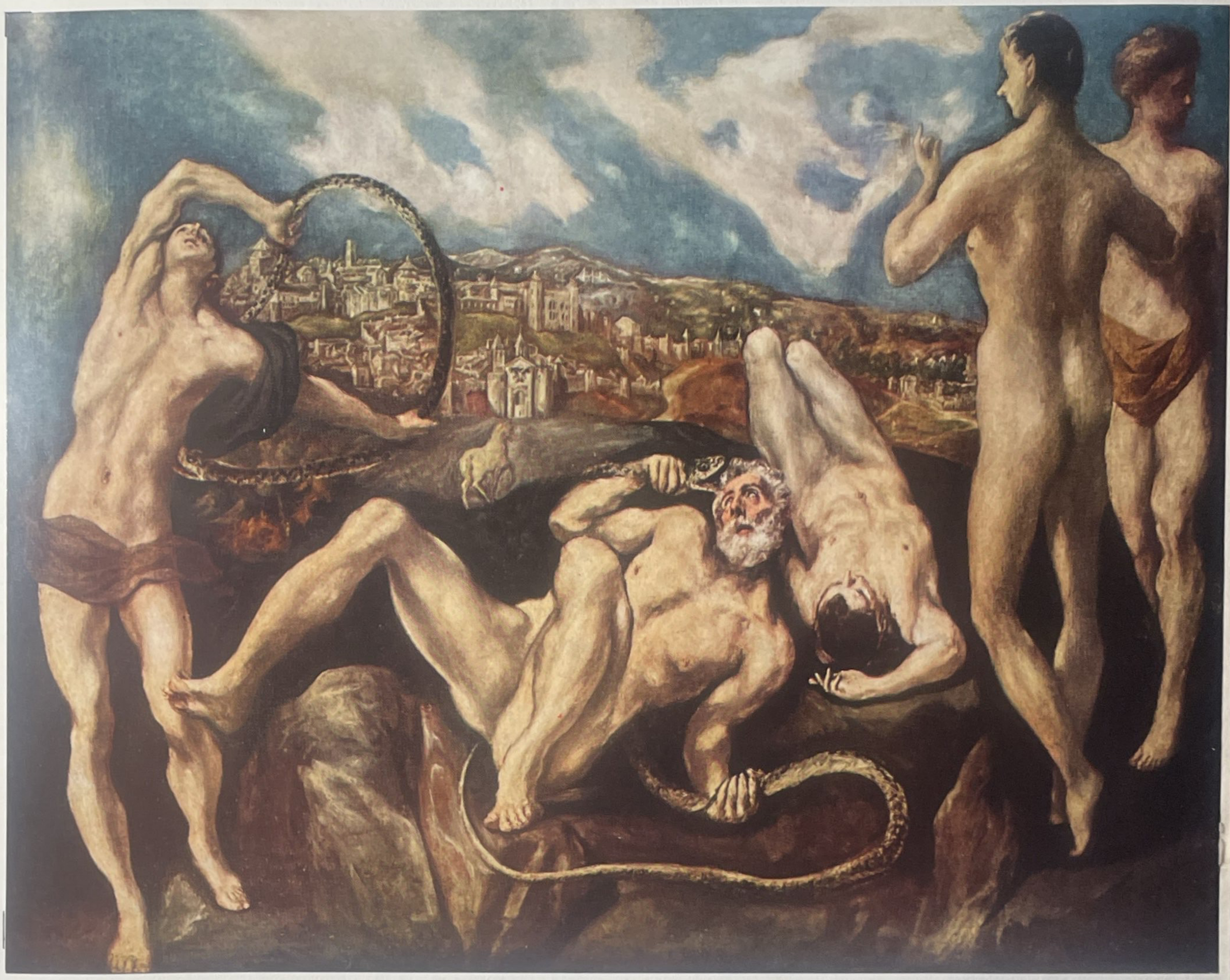


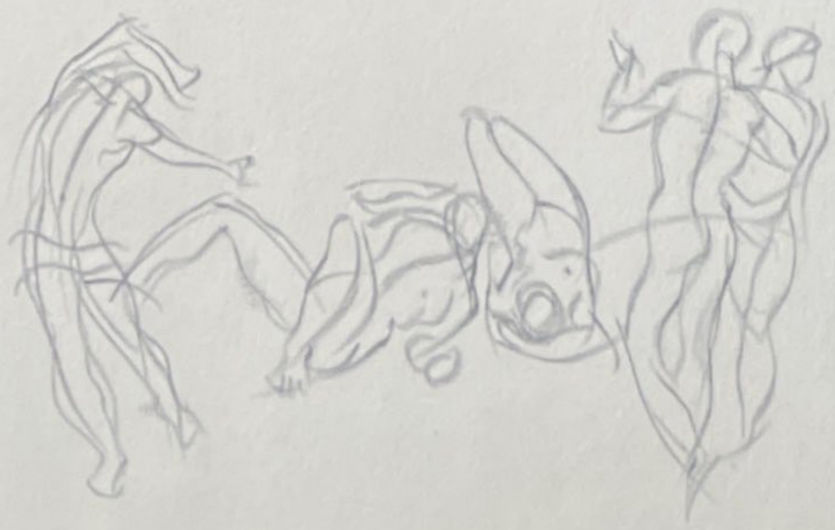
Checking for errors: Since you are working on transparent paper it is easy to turn it over and see your drawing in reverse. This often shows up errors in proportion or construction to which your eye has become accustomed.



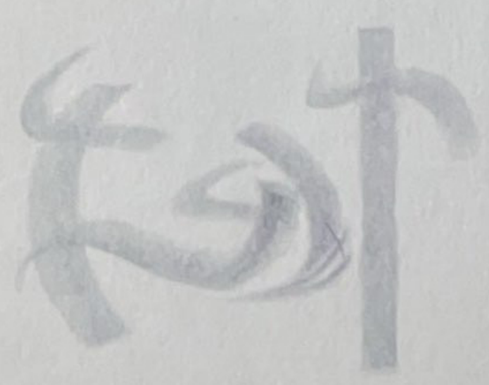
Refining the forms: Correct any errors revealed by reversing the picture. Reverse it again for a double check. Continue developing your drawing to the degree of finish you wish.

EL GRECO
The Laocoon
National Gallery of Art, Washington, D.C.
Samuel H. Kress Collection





The famous mythological subject — Laocoon and his sons being destroyed by two snakes — afforded El Greco a magnificent opportunity to portray the human figure in action. The motif of the snakes suggested a compositional pattern of tense, sinuous curves. The small, Chinese-looking diagram is a simplification of these figures in terms of over-all gesture. The other diagram shows how these gestures were captured in the final arrangement.



Courtesy, Museum of Fine Arts, Boston

MATISSE. Carmelina

The figure is presented with a strong quality of realism in spite of the broad handling, chiefly because the artist is thinking in terms of solid form. Detail is ignored; planes of light serve to indicate the cylinders of the arms, legs, and torso. To emphasize the curves of the figure the artist has set it against a background composed chiefly of rectangular forms and shapes.

MICHELANGELO. The Fall of Man (Detail)

The monumental figures of Adam and Eve which decorate the Sistine Chapel represent one of the high points in figure drawing. As befits the subject, the forms are heroic and massive. Throughout this complex figure design the artist has employed distortion deliberately to express the dramatic gesture of the action as powerfully as possible. Michelangelo is using the human figure creatively to tell an epic story. That he has succeeded is the common testimony of the ages.

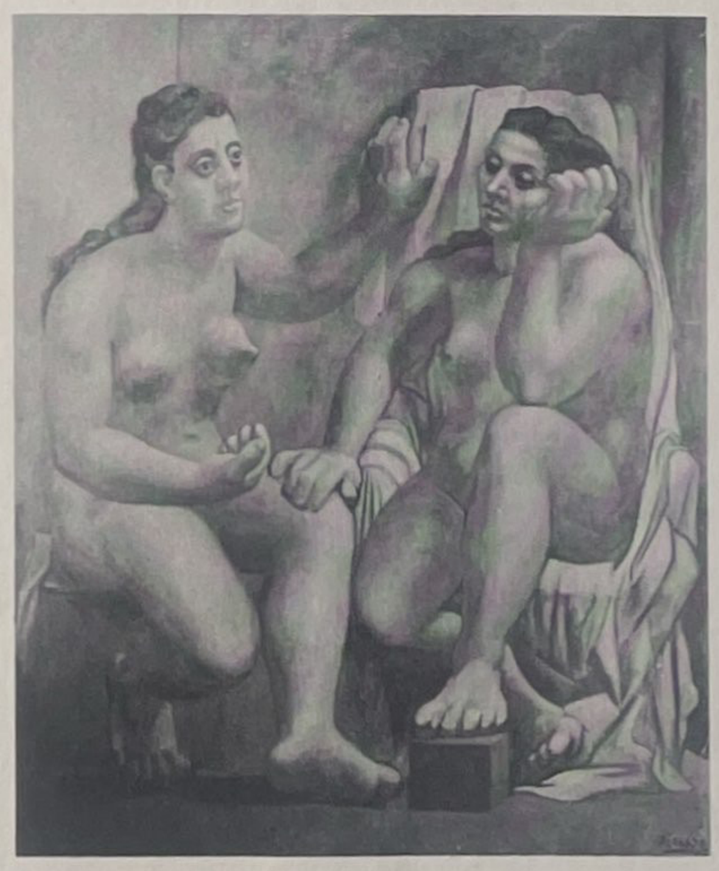
Photo Vizzanova

Collection Mme. O. Sainsere. Paris

GAUGUIN. "Otahi" (Alone)

This unusual, brooding pose appealed to the artist primarily because of the interesting shape described by the silhouette. This shape is accentuated by displaying the figure against planes of perfectly flat color. At the same time the figure has been presented as solid form through modeling and cast shadows. Playing three-dimensional form against flat planes in this way creates a very decorative effect, halfway between realistic painting and abstraction.

Collection Walter P. Chrysler, Jr.



PICASSO. Two Seated Women

The figures in this painting from Picasso's "classic" period are seen as elemental basic forms. All accidental details are eliminated and many of the elements, like the hands, feet, and features, are exaggerated in bulk. Strong modeling accentuates the form. The total effect is monumental and massive; it is as though these figures had been hewn out of stone.